

# **The 2011 Iowa Health Fact Book**

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*Host Website for the 2011 Iowa Health Fact Book:*

<http://www.public-health.uiowa.edu/FACTBOOK>

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## **Welcome to the 2011 Iowa Health Fact Book!**

*This book is the eighth in a series of Iowa Health Fact Book biennial publications and has been produced as a collaborative effort primarily between The University of Iowa College of Public Health and the Iowa Department of Public Health, but in partnership with other entities as well. New to this edition is information on state-level health indicators from the U.S. Agency for Healthcare Research and Quality, and accidental mortality statistics. Much of the information in the book is presented for each of Iowa's 99 counties and includes data on disease incidence and mortality, health and social determinants of health, health resources, and environmental factors. Whenever possible, we have included the same types of information in the same format as in the past, to allow assessment of trends over time. With this book, we present a tool that is useful to Iowa's health care providers, health policy-makers, public health practitioners, and health researchers alike.*

*This and previous editions are available for download via the College of Public Health website ([www.public-health.uiowa.edu/factbook](http://www.public-health.uiowa.edu/factbook)) and via a link from the Iowa Department of Public Health website ([www.idph.state.ia.us](http://www.idph.state.ia.us)) under "Iowa Health Factbook" of the A-Z Index. A limited number of printed copies of the 2011 edition will be available for those who prefer a bound book. Note that the pages of the book can be printed from the CD-ROM files or from PDF files on our website.*

*As we continue this effort over the years, we are in a better position to track changes longitudinally. Like the previous editions, we present the data in a descriptive format, without analysis and interpretation of trends. The interested reader is free to use these data in his/her own analyses, and is encouraged to do so with care and attention paid to analytic issues such as small counts, possible changes in the way the data are collected, or changes in definitions. The data source is given for each page of the book, and those responsible for collecting the data can address any questions you may have. You will also find a list of other health information resources and their contact information in the Appendix.*

*We are pleased to make this rich source of health information available to the public and hope that you find it useful.*

*Sincerely,*

*Susan J. Curry, Ph.D.*

*Dean, College of Public Health*

*Jane Pendergast, Ph.D., Editor*

*Grant Brown, B.S., Co-Editor*

*Center for Public Health Statistics*

## Introduction

In the 2011 Iowa Health Fact Book, state-wide data relating to health outcomes, social determinants of health, health behaviors, and health care resources are presented, generally at the county level. The data have been compiled in this book, but were collected using different methodologies by various organizations and reporting mechanisms. We encourage readers who would like to use these data to learn about the data collection processes and data definitions from those responsible for collecting the information. The use of U.S. Census data to compute adjusted rates, sparse data concerns, data groupings, data definitions, and use of ranks are described in the Fact Book Conventions section of this Introduction. Information on the demographic makeup of the state of Iowa can be found in the Demographics section and, new this year, a high level comparison of healthcare in Iowa to other states can be found in the State Snapshot section, with data provided by the Agency for Healthcare Research and Quality.

The remaining eleven sections provide valuable information on a variety of aspects of the health of Iowans. The Social Determinants of Health section was added in 2009. Data from this section place emphasis on social and behavioral conditions affecting health. The Health Behaviors section tracks behaviors affecting our health, including the 2010 Iowa Youth Survey. The Prenatal and Infant Health section covers information regarding infants, but also health behaviors of their mothers during pregnancy. The Infectious Diseases section focuses mainly on sexually transmitted diseases, although other infectious disease data are presented as well. The Cancer Incidence and Mortality section provides both crude and age-adjusted rates for selected major types of cancer. The Registry's incidence and IDPH's mortality databases have been used to generate the cancer incidence and cancer mortality statistics provided in this section of the 2011 Iowa Health Fact Book via a software program called SEER\*Stat (version 7.0.4), which is provided by the National Cancer Institute. The Injury Mortality section reveals both crude and age-adjusted rates for certain causes of mortality, such as motor vehicle deaths and deaths caused by firearms. Closely related is the Youth Injury Mortality section, providing the same type of data but restricted to individuals aged less than 20. The last mortality section, Other Mortality, presents crude and age-adjusted rates for mortality not caused by cancer or the causes listed in the previous two sections. A component of a good health care system is adequate capacity of both facilities and health care providers. The Health Care Providers chapter shows counts and crude rates of various types of providers across the state. The Health Care Facilities chapter details counts and crude rates for a variety of types of facilities. The final section of the book, entitled Environmental Health Indicators, focuses exclusively on the testing of blood lead poisoning of children in Iowa.

## **Fact Book Conventions**

### **Layout**

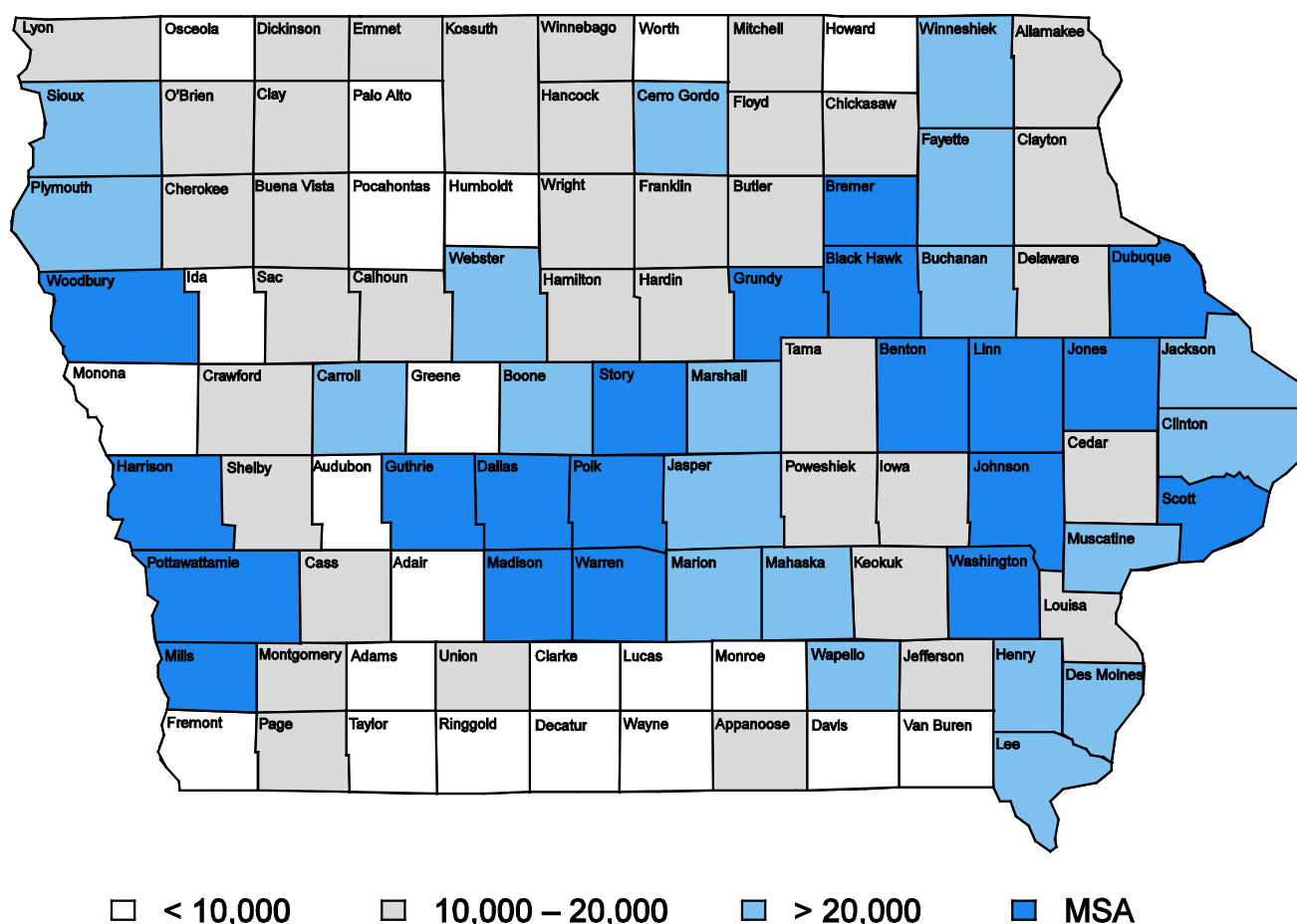
The time interval covered differs across the data items, mainly due to differences in data availability. Where reasonable and possible, county-specific data are presented. When it is not presented in that format, it is either because the data were too sparse (that is, a relatively small number of counties with non-zero counts) or they were not available at the county level. Since many of the data items presented would be expected to vary with county population size, the counties have been organized into groups based on their county population size. Both crude and age-adjusted population rates are presented when reasonable, which facilitates comparisons across counties and allows for estimates of county level health care burdens. For data items in which historical counts earlier than those presented in this book are available, line graphs showing time trends by county grouping are presented as well.

### **Four County Groupings**

An MSA (Metropolitan Statistical Area) county is defined by the U. S. Census Bureau as a central city along with the counties economically and socially connected to it. Each MSA must have one city with at least 50,000 inhabitants or a Census-defined urbanized area with a total metropolitan population of at least 100,000 (75,000 in New England). Under the year 2000 standards, rural counties may be included in an MSA if at least 25 percent of the workers who live in the county work within the central county or counties (that is, the county or counties containing the urban core of 50,000 or more population) of the MSA. A county can also be included if at least 25 percent of the jobs in the county are filled by workers living in the central counties of the MSA. This definition was updated following the 2000 Census resulting in many newly classified MSA counties.

There were twenty counties defined by the U. S. Census Bureau as MSA from the 2000 Census. The seventy-nine other counties were classified into groups based on population size using a 10 year average from 2000 – 2009. No counties switched categories between the 2009 Fact Book and this one. There are 22 counties with less than 10,000 residents, 37 counties with 10,000 to 20,000 residents and 20 counties with 20,000 to 50,000 residents. See the map on the following page to identify the counties in each group.

## County Group Based on 2000-2009 Average Population



### Small Numbers

If the number of county-specific events in a health outcome table was less than five, we masked the count by replacing it with an asterisk (\*) to protect subject confidentiality. However, all numbers are included in the computations needed for the line graphs and other charts accompanying the health outcomes tables, which summarizes data over a larger number of people. If only one value in a county grouping is masked with an (\*), then we do not report the grouping total, only a range of possible values.

### Population Standard

The Year 2000 Estimated United States Standard Million Population from the United States Census Bureau has been used for adjustment purposes, because the 2010 Census data are not yet available.

## **Adjustment Calculations**

Both crude and age-adjusted rates have been calculated and presented in many of the data tables. Crude rates for an entity (e.g., county) are the number of events of a health outcome divided by the population at risk in the county. The age-adjusted rates used in this book are a weighted average of the age-specific rates from the targeted population (e.g., county), where the weights are the proportions of persons in the corresponding age groups of a standard population. As stated above, the Year 2000 United States population was used as the standard population. If data only represent one age group then the age-adjusted rate is identical to the crude rate and thus not reported (e.g., Live Births).

There are no hard and fast rules as to when one should use either the crude or the adjusted rate for comparisons. A few guidelines can, however, be noted. A crude rate for a county reflects the disease or mortality burden for a county and may be useful to the health policy makers in the county. If a county has a relatively high proportion of elderly and the disease is associated with older individuals, crude rates will reflect that higher burden due to greater numbers of elderly. The age-adjusted rate is also useful as a county comparison index, but after putting both counties on the same playing field with respect to the age distribution in each. These rates have been adjusted to the same standard population, so the effect of differing age distributions in two counties is eliminated before the comparison is made. Hence, both are useful descriptive indices of diseases, but with differences in interpretation.

## **Ranks**

The county rank represents the ranking of the county among the 99 counties of Iowa, with a rank of “1” given to the county with the largest rate and “99” to the county with the smallest rate. In general, ranks were presented for a data table when no counts in the table were less than five; i.e. when there were no very small numbers.

## **Maps**

State maps were created to present the data for Health Care Providers and Health Care Facilities instead of tables. The number in the county represents the 2010 count. The crude rates were calculated from the estimated 2009 county population. These rates were grouped into four categories of approximately twenty-five counties each and shaded on the map. If a county rate fell on the border between two categories, it was shaded using the smaller region.



## Demographics

Many of the health indicators in the 2011 Iowa Health Fact Book are presented with rates calculated using the population of the county and state. These rates are also stratified into population subgroups based on a 10-year average of each county's population. This not only contrasts the rural and urban aspects of the state but also includes trends in age and ethnic distribution of the population. The Year 2000 U.S. standard population age distribution was used for calculating age-adjusted rates, as county level age data from the 2010 Census was not available at the time of publication. Population estimates have been obtained from the U.S. Census and from the State Health Registry of Iowa via the National Cancer Institute's SEER\*Stat software program. Estimates are used for individual years and for year groupings, and may differ slightly from previous fact books due to U.S. Census adjustments.

### KEY FEATURES IN IOWA DEMOGRAPHICS...

- ✓ Increasing urbanization
- ✓ Females represent 49.3% of population
- ✓ Median age 37.9 years
- ✓ Over 65 represents 14.8% of population

The population in Iowa is becoming increasingly urbanized. Using the 2000 Census, twenty counties were defined as Metropolitan Statistical Areas (MSA) doubling the 2003 number of ten MSA defined counties. The Metropolitan Statistical Areas are Ames (Story County), Cedar Rapids (Benton, Jones, Linn Counties), Davenport (Scott County), Des Moines (Dallas, Guthrie, Madison, Polk, Warren Counties), Dubuque (Dubuque County), Iowa City (Johnson, Washington Counties), Omaha-Council Bluffs (Harrison, Mills, Pottawattamie Counties), Sioux City (Woodbury County), and Waterloo-Cedar Falls (Black Hawk, Bremer, Grundy Counties). Iowa's estimated population surpassed 3 million in

### CHARACTERISTICS OF RACE / ETHNICITY

White	91.3%
Black or African American	2.9%
Asian	1.7%
Some other race or races	4.1%
Hispanic or Latino (of any race)	5.0%

2008 and almost 57% of the 2009 estimated Iowa population of 3,007,856 lived in MSA counties, compared to 56% in 2009 and 51% in 2007.

As reported in 2009, larger counties have a greater percentage young adults (15-44 years), and the smaller counties have a larger percentage of persons 65 years of age or older. These age distributions are used to standardize the data in the

following chapters so risk factors other than age can be compared. The percent of Iowans age 65 and older increased steadily from 1970 through the early 1990's, but has been slowly decreasing since about 1995. The percent change in county population from 2000 to 2009 presented in the following tables indicates the shrinking of small counties and growth of larger ones.

# State Population Distributions

## Estimated Annual Population Distribution 2000-2009

	County	2000	2001	2002	2003	2004	2005	2006
Counties with Average Population < 10,000	Adair	8,243	8,077	7,964	7,916	7,847	7,721	7,677
	Adams	4,482	4,396	4,350	4,321	4,256	4,159	4,141
	Audubon	6,830	6,657	6,549	6,438	6,378	6,251	6,179
	Clarke	9,133	9,180	9,168	9,211	9,221	9,076	9,074
	Davis	8,541	8,571	8,565	8,494	8,555	8,507	8,530
	Decatur	8,689	8,652	8,543	8,469	8,454	8,460	8,372
	Fremont	8,010	7,866	7,766	7,704	7,604	7,553	7,549
	Greene	10,366	10,142	10,092	10,000	9,928	9,778	9,568
	Howard	9,932	9,869	9,794	9,713	9,679	9,620	9,510
	Humboldt	10,381	10,280	10,073	10,014	9,935	9,801	9,762
	Ida	7,837	7,662	7,550	7,445	7,295	7,169	7,021
	Lucas	9,422	9,443	9,438	9,473	9,619	9,588	9,489
	Monona	10,020	9,818	9,705	9,682	9,511	9,344	9,223
	Monroe	8,016	7,937	7,793	7,812	7,784	7,728	7,643
	Osceola	7,003	6,937	6,849	6,811	6,763	6,621	6,571
	Palo Alto	10,147	10,029	9,843	9,664	9,648	9,569	9,438
	Pocahontas	8,662	8,459	8,336	8,143	7,970	7,793	7,638
	Ringgold	5,469	5,389	5,294	5,263	5,246	5,191	5,101
	Taylor	6,958	6,892	6,810	6,737	6,677	6,522	6,541
	Van Buren	7,809	7,735	7,736	7,671	7,664	7,625	7,640
	Wayne	6,730	6,640	6,635	6,568	6,501	6,422	6,391
	Worth	7,909	7,801	7,794	7,719	7,708	7,715	7,618
	<b>Total</b>	<b>180,589</b>	<b>178,432</b>	<b>176,647</b>	<b>175,268</b>	<b>174,243</b>	<b>172,213</b>	<b>170,676</b>
Counties with Average Population 10,000 – 20,000	Allamakee	14,675	14,343	14,309	14,371	14,371	14,419	14,442
	Appanoose	13,721	13,558	13,377	13,452	13,355	13,315	13,158
	Buena Vista	20,411	20,194	20,142	19,990	19,800	19,713	19,604
	Butler	15,305	15,005	14,826	14,782	14,782	14,712	14,632
	Calhoun	11,115	10,946	10,719	10,522	10,388	10,247	10,101
	Cass	14,684	14,476	14,214	14,228	14,078	13,918	13,912
	Cedar	18,187	18,074	18,049	18,058	18,030	17,933	18,000
	Cherokee	13,035	12,835	12,530	12,347	12,210	12,021	11,791
	Chickasaw	13,095	13,047	12,763	12,550	12,436	12,268	12,268
	Clay	17,372	17,255	17,071	16,957	16,916	16,784	16,732
	Clayton	18,678	18,451	18,211	18,107	18,026	17,853	17,779
	Crawford	16,942	16,890	16,847	16,752	16,675	16,591	16,486
	Delaware	18,404	18,212	18,123	17,977	17,797	17,619	17,560
	Dickinson	16,424	16,473	16,343	16,318	16,478	16,608	16,621
	Emmet	11,027	10,873	10,795	10,684	10,508	10,468	10,371
	Floyd	16,900	16,618	16,589	16,511	16,417	16,309	16,335
	Franklin	10,704	10,599	10,636	10,588	10,641	10,664	10,574
	Hamilton	16,438	16,163	16,204	16,151	16,007	15,914	15,734
	Hancock	12,100	11,903	11,760	11,771	11,670	11,626	11,482
	Hardin	18,812	18,648	18,419	18,213	18,002	17,768	17,637
	Iowa	15,671	15,780	15,756	15,827	15,801	15,911	15,932
	Jefferson	16,181	16,035	15,806	15,721	15,684	15,553	15,491
	Keokuk	11,400	11,372	11,341	11,194	11,073	10,893	10,727
	Kossuth	17,163	16,780	16,499	16,294	16,156	15,956	15,664
	Louisa	12,183	12,172	12,195	12,175	12,048	11,775	11,802
	Lyon	11,763	11,634	11,581	11,559	11,512	11,449	11,332
	Mitchell	10,874	10,735	10,826	10,826	10,891	10,784	10,807
	Montgomery	11,771	11,506	11,300	11,188	11,162	11,177	11,135

# State Population Distributions (continued)

Estimated Annual Population Distribution 2000-2009								
	County	2007	2008	2009	Percent Change <sup>1</sup>	Ten Year Average <sup>2</sup>	Male <sup>3</sup>	Female <sup>3</sup>
Counties with Average Population < 10,000	Adair	7,584	7,445	7,350	-10.80%	7,782	3,789	3,968
	Adams	4,099	4,032	3,930	-12.30%	4,217	2,073	2,119
	Audubon	6,132	6,105	6,032	-11.70%	6,355	3,013	3,239
	Clarke	9,017	9,085	9,086	-0.50%	9,125	4,537	4,577
	Davis	8,575	8,573	8,562	0.20%	8,547	4,252	4,281
	Decatur	8,342	8,201	8,231	-5.30%	8,441	4,145	4,305
	Fremont	7,569	7,422	7,345	-8.30%	7,639	3,788	3,816
	Greene	9,497	9,349	9,251	-10.80%	9,797	4,782	4,977
	Howard	9,465	9,436	9,410	-5.30%	9,643	4,782	4,833
	Humboldt	9,626	9,565	9,473	-8.70%	9,891	4,840	4,977
	Ida	6,980	6,922	6,762	-13.70%	7,264	3,513	3,652
	Lucas	9,457	9,337	9,179	-2.60%	9,445	4,665	4,851
	Monona	9,123	9,019	8,882	-11.40%	9,433	4,566	4,794
	Monroe	7,569	7,573	7,549	-5.80%	7,740	3,777	3,930
	Osceola	6,444	6,448	6,344	-9.40%	6,679	3,304	3,347
	Palo Alto	9,420	9,318	9,279	-8.60%	9,636	4,708	4,852
	Pocahontas	7,614	7,479	7,346	-15.20%	7,944	3,888	3,969
	Ringgold	5,061	5,013	4,944	-9.60%	5,197	2,532	2,665
	Taylor	6,425	6,337	6,344	-8.80%	6,624	3,221	3,355
	Van Buren	7,676	7,690	7,679	-1.70%	7,693	3,826	3,834
	Wayne	6,283	6,267	6,283	-6.60%	6,472	3,068	3,363
	Worth	7,623	7,605	7,541	-4.70%	7,703	3,856	3,837
	<b>Total</b>	<b>169,581</b>	<b>168,221</b>	<b>166,802</b>	<b>-7.60%</b>	<b>173,267</b>	<b>84,925</b>	<b>87,541</b>
Counties with Average Population 10,000 – 20,000	Allamakee	14,421	14,416	14,407	-1.80%	14,417	7,317	7,137
	Appanoose	12,926	12,780	12,698	-7.50%	13,234	6,371	6,893
	Buena Vista	19,455	19,491	19,601	-4%	19,840	9,996	9,755
	Butler	14,626	14,595	14,341	-6.30%	14,761	7,310	7,411
	Calhoun	9,951	9,851	9,671	-13%	10,351	5,195	5,056
	Cass	13,870	13,812	13,758	-6.30%	14,095	6,828	7,165
	Cedar	17,950	18,047	18,006	-1%	18,033	8,887	9,111
	Cherokee	11,684	11,501	11,409	-12.50%	12,136	5,932	6,088
	Chickasaw	12,174	12,071	12,017	-8.20%	12,469	6,177	6,173
	Clay	16,629	16,617	16,617	-4.30%	16,895	8,174	8,636
	Clayton	17,686	17,555	17,463	-6.50%	17,981	8,914	8,983
	Crawford	16,503	16,399	16,416	-3.10%	16,650	8,367	8,216
	Delaware	17,506	17,335	17,205	-6.50%	17,774	8,788	8,884
	Dickinson	16,586	16,644	16,623	1.20%	16,512	8,098	8,452
	Emmet	10,341	10,364	10,241	-7.10%	10,567	5,176	5,322
	Floyd	16,224	16,031	15,910	-5.90%	16,384	7,963	8,407
	Franklin	10,623	10,567	10,540	-1.50%	10,614	5,279	5,287
	Hamilton	15,538	15,352	15,238	-7.30%	15,874	7,913	7,976
	Hancock	11,310	11,229	11,046	-8.70%	11,590	5,726	5,871
	Hardin	17,505	17,377	17,144	-8.90%	17,953	8,765	9,053
	Iowa	15,794	15,750	15,811	0.90%	15,803	7,792	8,086
	Jefferson	15,532	15,431	15,472	-4.40%	15,691	7,656	7,949
	Keokuk	10,724	10,655	10,562	-7.40%	10,994	5,342	5,598
	Kossuth	15,456	15,245	15,154	-11.70%	16,037	7,827	8,111
	Louisa	11,768	11,694	11,245	-7.70%	11,906	5,933	5,974
	Lyon	11,228	11,189	11,172	-5%	11,442	5,704	5,731
	Mitchell	10,786	10,794	10,781	-0.90%	10,810	5,309	5,500
	Montgomery	10,939	10,792	10,796	-8.30%	11,177	5,290	5,839

<sup>1</sup>Percent change from 2000 to 2009<sup>2</sup>2000-2009 Average<sup>3</sup>2003-2007 Average

Source: Population Division, U.S. Census Bureau and SEER\*Stat

# State Population Distributions (continued)

Estimated Annual Population Distribution 2000-2009								
Counties with Average Population 10,000 – 20,000	County	2000	2001	2002	2003	2004	2005	2006
	O'Brien	15,102	14,881	14,681	14,589	14,345	14,257	14,191
	Page	16,976	16,869	16,425	16,166	16,001	16,002	16,043
	Poweshiek	18,815	18,850	18,755	18,806	18,794	18,625	18,615
	Sac	11,529	11,358	11,040	10,848	10,717	10,528	10,473
	Shelby	13,173	12,992	12,836	12,747	12,647	12,408	12,305
	Tama	18,103	18,014	17,901	17,846	17,929	17,897	17,800
	Union	12,309	12,201	12,083	11,881	11,919	11,943	11,990
	Winnebago	11,723	11,533	11,329	11,303	11,189	11,167	10,943
	Wright	14,334	14,055	13,819	13,624	13,537	13,377	13,187
	<b>Total</b>	547,099	541,330	536,100	532,923	529,992	526,452	523,656
Counties with Average Population > 20,000	Boone	26,224	26,210	26,032	26,123	26,224	26,311	26,246
	Buchanan	21,093	20,945	20,761	20,778	20,852	20,760	20,875
	Carroll	21,421	21,214	21,138	20,984	20,888	20,911	20,766
	Cerro Gordo	46,447	45,744	45,263	45,142	44,654	44,321	44,048
	Clinton	50,149	49,845	49,614	49,487	49,380	49,299	49,264
	Des Moines	42,351	41,917	41,307	41,152	40,742	40,553	40,453
	Fayette	22,008	21,674	21,424	21,299	21,024	20,939	20,701
	Henry	20,336	20,336	19,967	20,105	20,073	20,166	20,095
	Jackson	20,296	20,252	20,116	20,098	20,078	20,035	19,988
	Jasper	37,213	37,266	37,366	37,400	37,256	37,011	36,735
	Lee	38,052	37,386	36,858	36,472	36,385	36,109	35,997
	Mahaska	22,335	22,378	22,309	22,021	22,060	22,220	22,039
	Marion	32,052	32,505	32,412	32,277	32,256	32,310	32,830
	Marshall	39,311	39,274	39,033	39,033	39,227	39,020	38,877
	Muscatine	41,722	41,792	41,803	41,680	41,806	41,952	42,226
	Plymouth	24,849	24,745	24,552	24,584	24,687	24,545	24,460
	Sioux	31,589	31,742	31,795	31,782	31,866	31,905	32,114
	Wapello	36,051	35,954	35,803	35,716	35,651	35,771	35,673
	Webster	40,235	40,037	39,672	39,372	38,930	38,574	38,550
	Winneshiek	21,310	21,236	21,123	20,896	20,894	20,871	20,784
	<b>Total</b>	635,044	632,452	628,348	626,401	624,933	623,583	622,721
MSA Counties	Benton	25,308	25,619	25,991	26,176	26,493	26,643	26,571
	Black Hawk	128,012	127,656	126,628	126,026	126,077	126,235	126,556
	Bremer	23,325	23,401	23,202	23,273	23,369	23,394	23,531
	Dallas	40,750	42,720	44,324	46,308	49,388	51,779	54,592
	Dubuque	89,143	88,998	89,218	90,116	90,618	90,926	91,390
	Grundy	12,369	12,285	12,303	12,241	12,245	12,232	12,227
	Guthrie	11,353	11,220	11,214	11,310	11,350	11,201	11,093
	Harrison	15,666	15,638	15,497	15,544	15,542	15,520	15,542
	Johnson	111,006	113,878	115,560	117,459	119,747	121,191	123,171
	Jones	20,221	20,158	20,150	20,212	20,365	20,303	20,324
	Linn	191,701	194,323	195,918	196,706	198,108	200,114	202,314
	Madison	14,019	14,148	14,315	14,454	14,689	14,864	15,196
	Mills	14,547	14,482	14,533	14,596	14,695	14,846	15,139
	Polk	374,601	381,093	385,838	390,092	393,899	401,993	409,146
	Pottawattamie	87,704	87,671	87,944	88,055	88,781	88,960	89,393
	Scott	158,668	158,542	158,677	158,808	159,323	160,073	161,473
	Story	79,981	80,057	81,612	81,453	81,897	81,757	83,476
	Warren	40,671	41,010	41,282	41,943	42,263	42,923	43,677
	Washington	20,670	21,000	20,982	20,994	21,011	21,037	21,100
	Woodbury	103,877	103,311	102,981	102,441	102,330	101,211	101,427
	<b>Total</b>	1,563,592	1,577,210	1,588,169	1,598,207	1,612,190	1,627,202	1,647,338

# State Population Distributions (continued)

Estimated Annual Population Distribution 2000-2009								
Counties with Average Population 10,000 – 20,000	County	2007	2008	2009	Percent Change <sup>1</sup>	Ten Year Average <sup>2</sup>	Male <sup>3</sup>	Female <sup>3</sup>
	O'Brien	14,036	13,898	13,928	-7.80%	14,391	7,033	7,251
	Page	15,913	15,527	15,260	-10.10%	16,118	8,216	7,807
	Poweshiek	18,662	18,493	18,423	-2.10%	18,684	9,046	9,682
	Sac	10,294	10,199	10,059	-12.80%	10,705	5,219	5,382
	Shelby	12,289	12,129	11,957	-9.20%	12,548	6,155	6,334
	Tama	17,670	17,549	17,377	-4%	17,809	8,789	9,070
	Union	12,051	12,154	12,241	-0.60%	12,077	5,781	6,214
	Winnebago	10,772	10,689	10,602	-9.60%	11,125	5,436	5,698
	Wright	13,039	12,878	12,716	-11.30%	13,457	6,623	6,717
	<b>Total</b>	520,461	517,100	513,907	-6.10%	528,902	260,327	266,819
Counties with Average Population > 20,000	Boone	26,297	26,186	26,072	-0.60%	26,193	12,907	13,370
	Buchanan	20,975	21,033	20,910	-0.90%	20,898	10,380	10,445
	Carroll	20,788	20,679	20,674	-3.50%	20,946	10,220	10,691
	Cerro Gordo	43,915	43,740	43,609	-6.10%	44,688	21,430	23,026
	Clinton	49,084	49,062	48,934	-2.40%	49,412	24,000	25,267
	Des Moines	40,634	40,803	41,058	-3.10%	41,097	19,756	20,932
	Fayette	20,379	20,238	20,164	-8.40%	20,985	10,340	10,538
	Henry	20,134	20,067	19,929	-2%	20,121	10,292	9,832
	Jackson	19,906	19,804	19,728	-2.80%	20,030	9,940	10,125
	Jasper	36,567	36,460	36,257	-2.60%	36,953	18,826	18,207
	Lee	35,823	35,484	35,447	-6.80%	36,401	17,982	18,133
	Mahaska	22,092	22,120	22,000	-1.50%	22,157	11,083	11,064
	Marion	32,654	32,774	32,682	2%	32,475	16,122	16,294
	Marshall	39,075	39,236	39,259	-0.10%	39,135	19,444	19,657
	Muscatine	42,456	42,670	42,934	2.90%	42,104	20,855	21,140
	Plymouth	24,303	24,262	24,210	-2.60%	24,520	12,272	12,270
	Sioux	32,017	32,064	32,244	2.10%	31,912	15,743	16,201
	Wapello	35,344	35,297	35,334	-2%	35,659	17,441	18,227
	Webster	38,448	38,372	38,346	-4.70%	39,054	19,695	19,129
	Winneshiek	20,824	20,711	20,629	-3.20%	20,928	10,319	10,567
	<b>Total</b>	621,715	621,062	620,420	-2.30%	625,668	309,047	315,115
MSA Counties	Benton	26,551	26,642	26,734	5.60%	26,273	13,200	13,276
	Black Hawk	126,737	128,040	129,276	1%	127,124	61,099	65,519
	Bremer	23,633	23,509	23,460	0.60%	23,410	11,426	12,054
	Dallas	57,278	59,977	61,950	52%	50,907	25,720	26,145
	Dubuque	92,254	92,589	93,072	4.40%	90,832	44,511	46,571
	Grundy	12,085	12,110	12,177	-1.60%	12,227	6,033	6,190
	Guthrie	11,051	10,984	10,833	-4.60%	11,161	5,562	5,633
	Harrison	15,416	15,245	15,328	-2.20%	15,494	7,620	7,887
	Johnson	125,536	128,145	131,005	18%	120,670	60,422	60,986
	Jones	20,403	20,430	20,364	0.70%	20,293	10,689	9,628
	Linn	205,283	207,839	209,226	9.10%	200,153	98,435	102,195
	Madison	15,343	15,454	15,409	9.90%	14,789	7,402	7,516
	Mills	15,147	15,127	15,002	3.10%	14,811	7,497	7,381
	Polk	416,276	422,893	429,439	14.60%	400,527	196,199	206,837
	Pottawattamie	89,572	89,986	90,224	2.90%	88,829	43,573	45,317
	Scott	162,339	164,437	166,650	5%	160,899	78,668	81,749
	Story	85,232	86,219	87,214	9%	82,890	42,620	40,200
	Warren	44,292	44,793	45,275	11.30%	42,813	21,090	21,975
	Washington	21,152	21,214	21,258	2.80%	21,042	10,258	10,840
	Woodbury	101,382	101,971	102,831	-1%	102,376	50,032	51,982
	<b>Total</b>	1,666,962	1,687,604	1,706,727	9.20%	1,627,520	802,056	829,881

<sup>1</sup>Percent change from 2000 to 2009<sup>2</sup>2000-2009 Average<sup>3</sup>2003-2007 Average

Source: Population Division, U.S. Census Bureau and SEER\*Stat

## Average Annual Population Distribution by Age: 2004-2008

County		% <1	% 1-4	% 5-14	% 15-24	% 25-44	% 45-64	% 65-84	% 85 +
Counties with Average Population < 10,000	Adair	1.07%	4.08%	12.13%	11.74%	21.39%	27.49%	17.54%	4.55%
	Adams	1.09%	4.10%	12.45%	11.23%	20.69%	28.48%	17.89%	4.07%
	Audubon	0.99%	3.89%	13.16%	12.53%	18.61%	28.15%	18.04%	4.64%
	Clarke	1.43%	5.35%	13.65%	12.74%	23.39%	26.74%	13.76%	2.94%
	Davis	1.59%	5.88%	14.85%	12.63%	22.47%	25.71%	13.79%	3.07%
	Decatur	1.25%	4.69%	11.54%	18.96%	22.15%	23.61%	14.83%	2.97%
	Fremont	1.19%	4.48%	13.01%	12.02%	20.40%	29.24%	16.36%	3.29%
	Greene	1.06%	4.37%	13.13%	12.53%	20.02%	27.41%	16.82%	4.66%
	Howard	1.31%	4.83%	13.47%	12.73%	22.06%	25.83%	15.91%	3.87%
	Humboldt	1.23%	4.72%	12.52%	12.82%	20.59%	27.28%	16.95%	3.90%
	Ida	1.19%	4.56%	12.53%	12.94%	19.85%	27.34%	17.66%	3.93%
	Lucas	1.19%	4.75%	14.30%	12.52%	22.91%	26.47%	14.57%	3.29%
	Monona	1.09%	4.36%	12.08%	11.19%	19.22%	28.76%	18.45%	4.85%
	Monroe	1.18%	4.69%	13.63%	11.49%	22.88%	27.12%	15.97%	3.04%
	Osceola	1.09%	4.65%	13.54%	13.15%	21.90%	27.18%	15.23%	3.25%
	Palo Alto	1.24%	4.72%	11.87%	14.23%	20.79%	25.63%	17.41%	4.11%
	Pocahontas	0.99%	4.05%	12.04%	13.45%	17.68%	29.31%	18.27%	4.23%
	Ringgold	1.20%	4.63%	12.25%	11.48%	19.66%	27.48%	19.18%	4.12%
	Taylor	1.09%	4.38%	13.01%	12.01%	20.92%	27.22%	17.31%	4.06%
	Van Buren	1.22%	4.73%	12.96%	12.34%	21.95%	27.66%	15.92%	3.21%
	Wayne	1.28%	4.89%	12.30%	11.96%	20.26%	26.95%	18.51%	3.86%
	Worth	1.04%	4.15%	13.06%	11.87%	23.33%	28.23%	14.97%	3.34%
	<b>Total</b>	1.19%	4.62%	12.91%	12.75%	21.13%	27.15%	16.47%	3.77%
Counties with Average Population 10,000 – 20,000	Allamakee	1.38%	5.40%	12.93%	12.42%	22.47%	27.09%	15.28%	3.02%
	Appanoose	1.28%	4.79%	12.06%	12.29%	22.88%	26.98%	16.32%	3.41%
	Buena Vista	1.41%	5.33%	14.14%	17.02%	21.43%	25.31%	12.36%	2.99%
	Butler	1.23%	4.55%	12.38%	11.76%	21.61%	29.01%	16.04%	3.42%
	Calhoun	1.03%	4.00%	11.54%	12.24%	20.62%	28.29%	17.78%	4.51%
	Cass	1.16%	4.56%	12.37%	11.73%	20.91%	27.87%	17.24%	4.15%
	Cedar	1.12%	4.54%	13.49%	11.92%	24.33%	28.58%	13.06%	2.95%
	Cherokee	1.00%	4.21%	12.78%	12.53%	18.49%	29.57%	17.87%	3.57%
	Chickasaw	1.27%	4.90%	13.56%	12.70%	20.68%	28.80%	15.32%	2.79%
	Clay	1.26%	4.96%	12.84%	12.26%	22.92%	27.23%	15.38%	3.15%
	Clayton	1.17%	4.64%	12.94%	12.01%	21.01%	29.23%	15.58%	3.41%
	Crawford	1.47%	5.70%	13.97%	14.48%	21.64%	26.31%	13.49%	2.94%
	Delaware	1.19%	4.76%	14.46%	13.66%	22.40%	27.22%	13.65%	2.64%
	Dickinson	1.05%	4.08%	10.94%	11.33%	20.94%	30.61%	17.76%	3.28%
	Emmet	1.32%	5.15%	12.21%	15.08%	21.84%	25.70%	15.05%	3.66%
	Floyd	1.27%	4.83%	13.66%	12.12%	22.10%	26.64%	15.96%	3.41%
	Franklin	1.33%	4.87%	13.09%	12.28%	21.51%	27.64%	15.75%	3.54%
	Hamilton	1.18%	4.73%	13.48%	12.06%	23.89%	26.79%	14.94%	2.93%
	Hancock	1.14%	4.51%	13.38%	12.99%	21.16%	28.60%	14.91%	3.32%
	Hardin	1.14%	4.79%	12.33%	14.26%	20.51%	26.44%	16.55%	3.99%
	Iowa	1.21%	4.85%	14.20%	11.97%	23.65%	26.96%	13.80%	3.37%
	Jefferson	1.00%	3.90%	11.76%	13.38%	20.78%	34.99%	11.68%	2.51%
	Keokuk	1.19%	4.85%	13.40%	12.35%	22.05%	27.11%	15.49%	3.56%
	Kossuth	1.11%	4.39%	13.18%	13.06%	18.43%	28.78%	17.61%	3.45%
	Louisa	1.24%	5.37%	15.31%	12.59%	25.88%	24.99%	12.46%	2.16%
	Lyon	1.44%	5.63%	15.04%	12.62%	22.32%	25.31%	14.42%	3.22%
	Mitchell	1.13%	4.80%	14.37%	12.80%	20.15%	25.96%	16.59%	4.19%
	Montgomery	1.21%	4.89%	13.34%	11.83%	21.41%	27.73%	15.88%	3.72%
	O'Brien	1.23%	4.81%	12.69%	12.90%	20.16%	26.15%	17.30%	4.75%



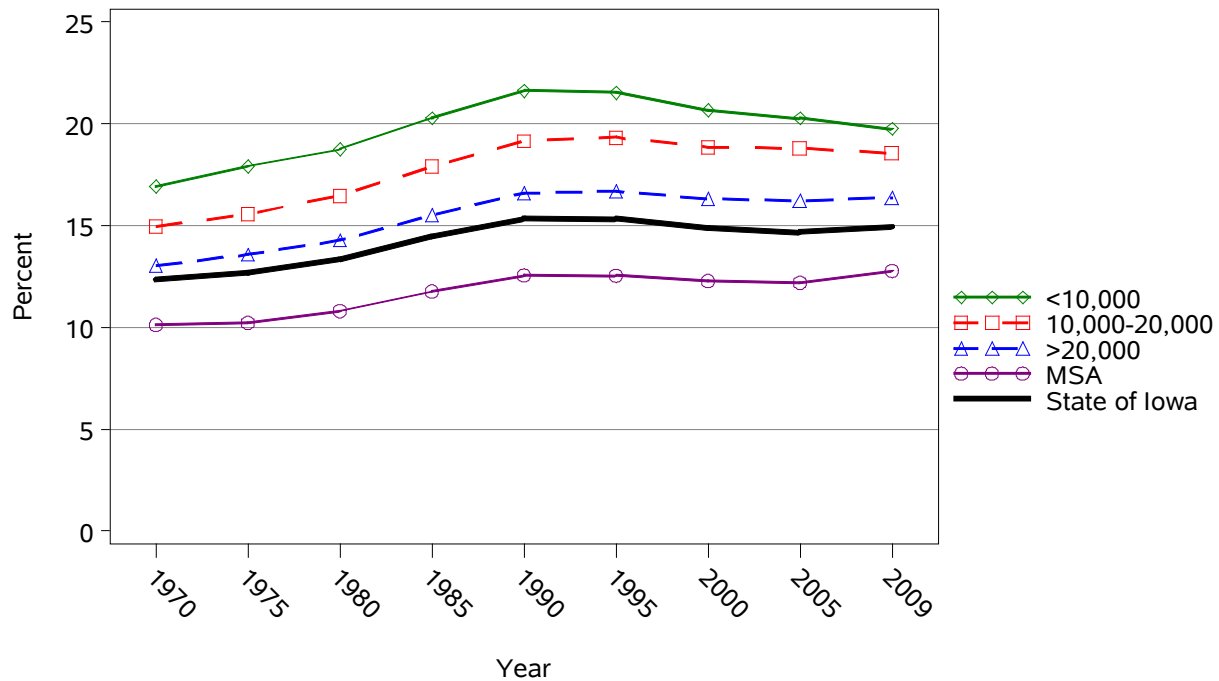
## Average Annual Population Distribution by Age: 2004-2008 (cont.)

Counties with Average Population 10,000 – 20,000 (cont)	County	% <1	% 1-4	% 5-14	% 15-24	% 25-44	% 45-64	% 65-84	% 85 +
	Page	1.09%	4.26%	11.72%	12.70%	23.82%	26.35%	16.45%	3.61%
	Poweshiek	1.04%	4.31%	11.78%	17.41%	21.62%	26.07%	14.51%	3.25%
	Sac	1.11%	4.50%	12.56%	11.87%	19.28%	27.79%	18.29%	4.59%
	Shelby	0.95%	4.24%	13.67%	12.43%	20.36%	27.85%	16.87%	3.63%
	Tama	1.33%	5.54%	14.71%	12.24%	22.26%	25.78%	14.88%	3.27%
	Union	1.30%	4.89%	12.02%	13.28%	22.92%	26.87%	15.54%	3.19%
	Winnebago	1.04%	4.24%	12.54%	14.97%	20.33%	28.15%	15.04%	3.70%
	Wright	1.32%	5.02%	13.02%	11.87%	20.73%	27.22%	16.68%	4.14%
	<b>Total</b>	1.20%	4.76%	13.08%	12.98%	21.67%	27.52%	15.40%	3.40%
Counties with Average Population > 20,000	Boone	1.19%	4.74%	12.83%	12.92%	25.57%	27.04%	12.82%	2.88%
	Buchanan	1.48%	5.99%	14.93%	13.32%	23.48%	25.84%	12.57%	2.39%
	Carroll	1.33%	4.98%	13.76%	13.16%	21.08%	26.35%	15.44%	3.89%
	Cerro Gordo	1.15%	4.43%	12.21%	13.15%	23.57%	27.78%	14.98%	2.73%
	Clinton	1.26%	4.95%	13.52%	12.88%	24.45%	26.68%	13.64%	2.62%
	Des Moines	1.31%	5.08%	12.72%	12.61%	24.14%	27.27%	14.04%	2.83%
	Fayette	1.13%	4.29%	13.11%	13.43%	21.50%	26.84%	16.18%	3.53%
	Henry	1.19%	4.61%	12.65%	14.31%	26.02%	26.04%	12.43%	2.75%
	Jackson	1.05%	4.36%	13.49%	12.61%	22.86%	27.72%	15.05%	2.85%
	Jasper	1.17%	4.90%	13.19%	12.02%	25.88%	26.90%	13.55%	2.39%
	Lee	1.14%	4.50%	12.49%	12.35%	23.89%	28.86%	14.01%	2.76%
	Mahaska	1.35%	5.16%	13.44%	14.29%	24.69%	25.58%	13.04%	2.46%
	Marion	1.27%	5.07%	13.47%	15.33%	23.86%	25.19%	13.01%	2.80%
	Marshall	1.59%	6.00%	13.52%	12.59%	23.21%	26.59%	13.88%	2.62%
	Muscatine	1.46%	5.93%	14.49%	12.94%	26.28%	26.31%	10.85%	1.75%
	Plymouth	1.29%	5.22%	14.67%	13.58%	22.50%	27.18%	13.08%	2.48%
	Sioux	1.55%	5.97%	14.01%	20.12%	21.13%	22.23%	12.13%	2.87%
	Wapello	1.40%	5.36%	12.54%	13.23%	24.44%	26.08%	14.12%	2.84%
	Webster	1.27%	4.97%	12.54%	16.22%	23.04%	25.39%	13.73%	2.84%
	Winneshiek	0.97%	3.83%	11.61%	21.07%	20.53%	25.37%	13.59%	3.01%
	<b>Total</b>	1.29%	5.06%	13.23%	13.95%	23.78%	26.41%	13.56%	2.71%
MSA Counties	Benton	1.15%	4.92%	14.69%	12.32%	26.29%	26.13%	11.90%	2.60%
	Blackhawk	1.37%	5.08%	11.75%	22.33%	21.24%	24.13%	11.74%	2.37%
	Bremer	1.15%	4.52%	12.79%	16.63%	22.26%	26.10%	13.67%	2.88%
	Dallas	1.52%	5.76%	15.70%	11.51%	33.09%	23.66%	7.45%	1.30%
	Dubuque	1.32%	5.25%	13.47%	15.00%	24.51%	25.31%	12.64%	2.49%
	Grundy	1.05%	4.27%	12.68%	12.62%	22.55%	27.99%	15.38%	3.46%
	Guthrie	1.10%	4.93%	13.18%	11.16%	21.57%	29.07%	16.12%	2.87%
	Harrison	1.14%	4.50%	13.76%	12.33%	23.72%	27.29%	14.38%	2.89%
	Johnson	1.29%	4.73%	10.26%	29.48%	25.94%	20.35%	6.75%	1.20%
	Jones	1.10%	4.33%	12.52%	13.10%	25.96%	26.87%	13.58%	2.55%
	Linn	1.40%	5.52%	13.55%	13.57%	28.95%	24.44%	10.66%	1.91%
	Madison	1.32%	5.54%	15.30%	11.43%	25.68%	26.79%	11.64%	2.29%
	Mills	1.23%	5.04%	14.58%	12.14%	25.50%	29.15%	10.49%	1.89%
	Polk	1.65%	6.26%	13.60%	12.96%	30.77%	23.73%	9.34%	1.69%
	Pottawattamie	1.38%	5.49%	13.13%	13.50%	26.47%	26.28%	11.88%	1.87%
	Scott	1.43%	5.67%	13.73%	13.51%	27.38%	25.98%	10.58%	1.71%
	Story	1.16%	4.23%	9.32%	36.26%	20.03%	18.70%	8.46%	1.85%
	Warren	1.20%	4.93%	14.54%	14.71%	25.72%	26.19%	10.85%	1.86%
	Washington	1.36%	5.73%	14.21%	11.95%	23.49%	26.25%	13.64%	3.36%
	Woodbury	1.63%	6.30%	14.70%	14.23%	26.29%	24.01%	10.92%	1.93%
	<b>Total</b>	1.43%	5.52%	13.14%	16.44%	27.03%	24.19%	10.34%	1.91%

Source: Population Division, U.S. Census Bureau and SEER\*Stat

## Aging Trend in Iowa

Percent of Iowans Age 65 and Older



## Estimated Year 2000 US Standard Population

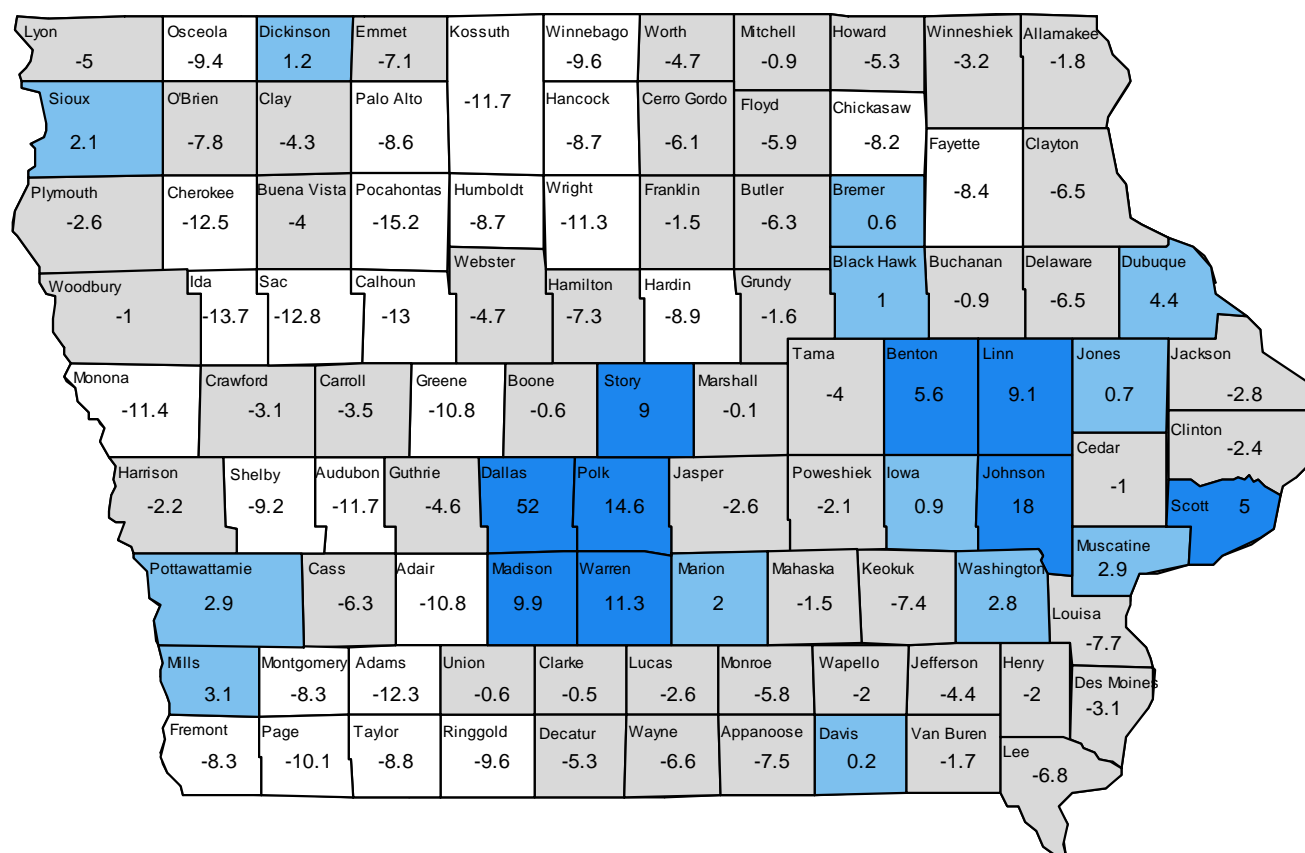
Age Range	Population	Percent of Total
<1	13,818	1.4%
01-04	55,317	5.5%
05-09	72,533	7.3%
10-14	73,032	7.3%
15-19	72,169	7.2%
20-24	66,478	6.6%
25-29	64,529	6.5%
30-34	71,044	7.1%
35-39	80,762	8.1%
40-44	81,851	8.2%
45-49	72,118	7.2%
50-54	62,716	6.3%
55-59	48,454	4.8%
60-64	38,793	3.9%
65-69	34,264	3.4%
70-74	31,773	3.2%
75-79	26,999	2.7%
80-84	17,842	1.8%
85+	15,508	1.6%
Total	1,000,000	100.0%

Source: Population Division, U.S. Census Bureau and SEER\*Stat



# Population Change

Percent Population Change form 2000-2009



□ <-8

□ -8 to 0

□ 0 to 5

■ >5

Source: Population Division, U.S. Census Bureau and SEER\*Stat



## Social Determinants of Health

In recent years, epidemiologists and other researchers concerned with improving the public's health have placed great emphasis on social and behavioral conditions affecting health. These determinants include 1) the social environment—the level and quality of connectedness with friends, family, and community along with socio-economic conditions such as unemployment and job control, income inequality, and race/ethnicity, and the availability of resources to meet basic daily needs; 2) the physical environment—the natural environment such as improved water and sanitation and the built environment—buildings, spaces, transportation systems, and products created or modified by people. The social and physical environmental levels are significantly interconnected; multi-level interventions that change policies and improve the social and physical environments can have a long-lasting impact on outcomes.

Two powerful social determinants of health are income and education. Both relate to health care access. The National Longitudinal Mortality Study cited in the Institute of Medicine's report, *The Future of the Public's Health*, found that mortality was associated with income, education, and occupation. Another 16-year study, also cited in the report, found that median family income in one's zip code of residence was predictive of death from a variety of causes.

There is a strong relationship between social and economic status and risk-related health behaviors such as smoking, physical inactivity, less nutritious diet, and heavy alcohol consumption. After reviewing a number of studies, the Institute of Medicine report concluded that those with more economic and social resources tend to adopt health-promoting behaviors and reduce risky behaviors at a faster rate than those who had fewer resources.

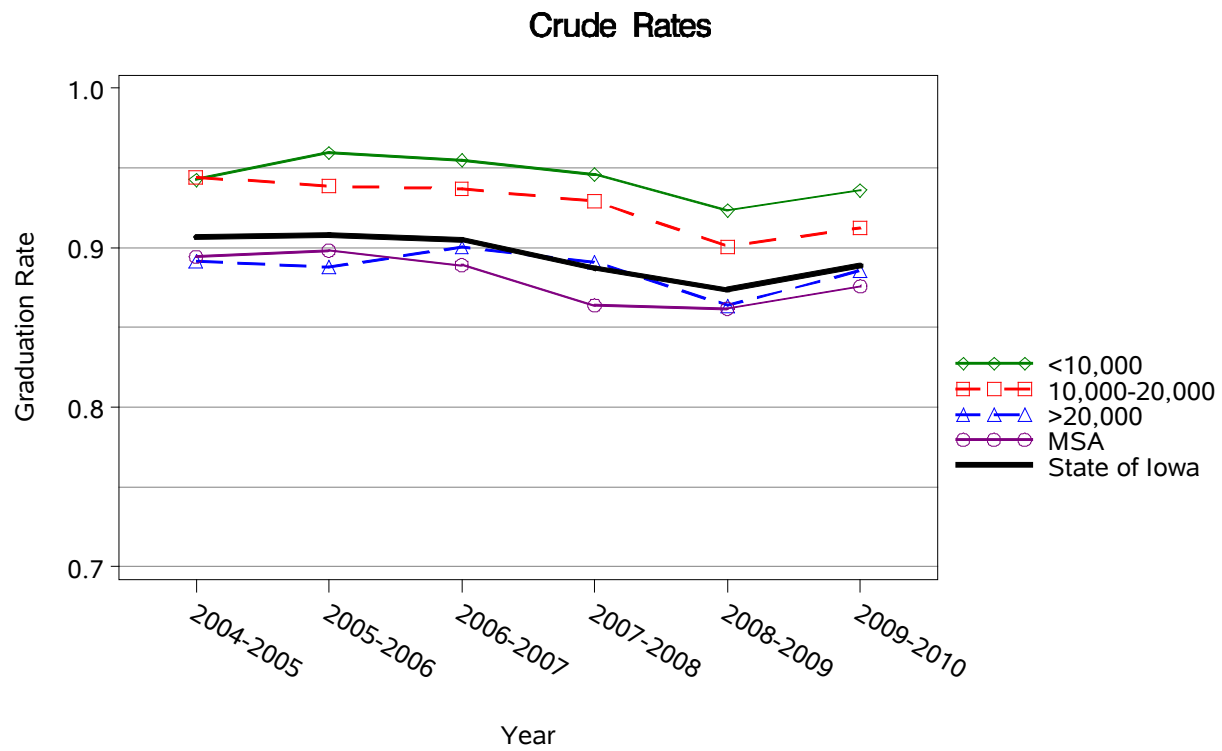
*Source: Institute of Medicine, The Future of the Public's Health in the 21<sup>st</sup> Century, pp. 58-60, National Academies Press, Washington DC 2003.*

## High School Graduation Rates 2009-2010 Academic Year

	County	# Diplomas	Crude	County	# Diplomas	Crude
Counties with Average Population < 10,000	Adair	72	0.97	Lucas	98	0.92
	Adams	43	0.96	Monona	128	0.89
	Audubon	87	0.96	Monroe	95	0.96
	Clarke	118	0.90	Osceola	60	0.90
	Davis	84	0.98	Palo Alto	136	0.94
	Decatur	84	0.94	Pocahontas	108	0.94
	Fremont	124	0.93	Ringgold	49	0.89
	Greene	117	0.91	Taylor	59	0.94
	Howard	126	0.93	Van Buren	94	0.97
	Humboldt	119	0.93	Wayne	85	0.96
	Ida	104	0.97	Worth	115	0.95
				<b>Total</b>	2,105	0.94
Counties with Average Population 10,000 – 20,000	Allamakee	215	0.96	Hardin	204	0.92
	Appanoose	165	0.96	Iowa	221	0.90
	Buena Vista	227	0.75	Jefferson	138	0.90
	Butler	119	0.92	Keokuk	162	0.89
	Calhoun	139	0.93	Kossuth	143	0.92
	Cass	174	0.87	Louisa	163	0.86
	Cedar	248	0.91	Lyon	140	0.98
	Cherokee	140	0.93	Mitchell	127	0.98
	Chickasaw	153	0.91	Montgomery	137	0.91
	Clay	175	0.87	O'Brien	195	0.91
	Clayton	189	0.95	Page	171	0.93
	Crawford	232	0.90	Poweshiek	226	0.96
	Delaware	243	0.97	Sac	93	0.97
	Dickinson	185	0.92	Shelby	160	0.92
	Emmet	122	0.87	Tama	183	0.92
	Floyd	167	0.93	Union	146	0.91
	Franklin	154	0.94	Winnebago	169	0.88
	Hamilton	192	0.93	Wright	182	0.94
	Hancock	127	0.89	<b>Total</b>	6,326	0.91
Counties with Average Population > 20,000	Boone	241	0.90	Lee	370	0.84
	Buchanan	219	0.96	Mahaska	187	0.91
	Carroll	245	0.92	Marion	403	0.94
	Cerro Gordo	393	0.89	Marshall	427	0.84
	Clinton	533	0.84	Muscatine	441	0.82
	Des Moines	378	0.81	Plymouth	324	0.95
	Fayette	274	0.90	Sioux	286	0.92
	Henry	224	0.87	Wapello	394	0.86
	Jackson	284	0.92	Webster	332	0.89
	Jasper	444	0.93	Winneshiek	251	0.97
				<b>Total</b>	6,650	0.89
MSA Counties	Benton	277	0.85	Linn	2,138	0.85
	Black Hawk	1,115	0.83	Madison	229	0.97
	Bremer	412	0.96	Mills	171	0.90
	Dallas	714	0.94	Polk	3,975	0.88
	Dubuque	972	0.91	Pottawattamie	965	0.83
	Grundy	222	0.92	Scott	1,670	0.85
	Guthrie	186	0.96	Story	785	0.93
	Harrison	225	0.93	Warren	568	0.94
	Johnson	891	0.87	Washington	236	0.88
	Jones	231	0.91	Woodbury	1,028	0.83
			0.89	<b>Total</b>	17,010	0.88
	<b>State Total</b>	32,091	0.89			

Source: Iowa Department of Education, Bureau of Planning, Research, Development, and Evaluation, Project EASIER

# High School Graduation Rates 2004-2010 by Academic Year



## Poverty Levels 2009

	County	%	% Margin of Error <sup>1</sup>	County	%	% Margin of Error <sup>1</sup>
Counties with Average Population < 10,000	Adair	10.7	2.3	Lucas	16.7	3.5
	Adams	12.4	3.0	Monona	12.2	2.8
	Audubon	10	2.4	Monroe	12.9	3.0
	Clarke	12	2.8	Osceola	9.2	2.1
	Davis	14.9	3.8	Palo Alto	11	2.4
	Decatur	21.1	4.5	Pocahontas	10.5	2.4
	Fremont	10.4	2.6	Ringgold	15.6	3.9
	Greene	11.3	2.6	Taylor	14.2	3.1
	Howard	11.6	2.7	Van Buren	17.8	3.5
	Humboldt	10.1	2.3	Wayne	16.6	3.7
	Ida	11.2	2.4	Worth	9.2	2.3
				<b>Total</b>		
Counties with Average Population 10,000 – 20,000	Allamakee	14.1	3.1	Hardin	9.8	2.3
	Appanoose	19.3	3.7	Iowa	7.6	1.6
	Buena Vista	15.2	2.3	Jefferson	15.4	3.4
	Butler	10.3	1.9	Keokuk	12.1	2.6
	Calhoun	11.2	2.7	Kossuth	10.1	2.3
	Cass	13.1	2.9	Louisa	10.9	2.6
	Cedar	7.9	1.7	Lyon	8	2.0
	Cherokee	9.7	2.2	Mitchell	9	2.3
	Chickasaw	9.3	2.2	Montgomery	14.5	2.9
	Clay	9	2.3	O'Brien	9.4	2.1
	Clayton	11.3	2.3	Page	15.1	3.2
	Crawford	12.3	2.9	Poweshiek	12.6	2.4
	Delaware	9.3	2.2	Sac	11.8	2.2
	Dickinson	8.4	1.9	Shelby	9.1	2.1
	Emmet	11.3	2.7	Tama	10.5	2.3
	Floyd	12.6	2.5	Union	14.2	3.0
	Franklin	10.2	2.5	Winnebago	10.7	2.3
	Hamilton	9.2	2.1	Wright	10.2	2.4
	Hancock	9.2	2.0	<b>Total</b>		
Counties with Average Population > 20,000	Boone	8.2	1.9	Lee	14.9	2.9
	Buchanan	10.9	2.4	Mahaska	13	2.5
	Carroll	9.8	1.9	Marion	9.2	2.0
	Cerro Gordo	10.6	2.5	Marshall	12.6	2.4
	Clinton	11.9	2.4	Muscatine	12	2.2
	Des Moines	12.8	2.9	Plymouth	7.2	1.8
	Fayette	12.9	2.9	Sioux	7.1	1.7
	Henry	15.8	2.4	Wapello	16.7	3.2
	Jackson	10.6	2.7	Webster	15	2.7
	Jasper	10	2.1	Winneshiek	10	2.5
				<b>Total</b>		
MSA Counties	Benton	7.9	1.8	Linn	9.5	1.4
	Black Hawk	17.3	2.0	Madison	8.5	1.9
	Bremer	7.5	1.6	Mills	9.1	2.2
	Dallas	6	1.2	Polk	10.9	1.1
	Dubuque	9.5	1.9	Pottawattamie	13.1	2.1
	Grundy	6.3	1.4	Scott	12.5	1.8
	Guthrie	9.2	2.2	Story	17.3	1.6
	Harrison	10.6	2.3	Warren	7.2	1.5
	Johnson	16.6	1.5	Washington	10.9	2.2
	Jones	9.5	2.5	Woodbury	14.7	2.2
				<b>Total</b>		
	<b>State Total</b>	11.8	0.3			

<sup>1</sup>Based on 90% confidence intervals

Source: U.S. Census Bureau, Small Area Income &amp; Poverty Estimates

# Uninsured (Under 65) 2007

	County			County		
	County	%	% Margin of Error <sup>1</sup>	County	%	% Margin of Error <sup>1</sup>
Counties with Average Population < 10,000	Adair	11.9	1.7	Lucas	9.8	1.7
	Adams	12.4	1.9	Monona	10.5	1.7
	Audubon	15.9	2.2	Monroe	9.7	1.6
	Clarke	10.9	1.7	Osceola	12.5	1.9
	Davis	14.6	2.1	Palo Alto	11.9	1.8
	Decatur	13.2	2	Pocahontas	14.2	2.1
	Fremont	11.5	1.9	Ringgold	13.5	2.2
	Greene	11.0	1.7	Taylor	14.1	2.1
	Howard	11.1	1.7	Van Buren	12.9	1.9
	Humboldt	11.0	1.7	Wayne	12.1	1.9
	Ida	13.7	2	Worth	13.4	1.8
				<b>Total</b>	12.2	
Counties with Average Population 10,000 – 20,000	Allamakee	15.5	2.2	Hardin	12.5	1.9
	Appanoose	9.2	1.3	Iowa	10.8	1.7
	Buena Vista	16.7	2.2	Jefferson	12.5	1.9
	Butler	13.1	1.9	Keokuk	13.5	2
	Calhoun	13.2	1.9	Kossuth	12.7	1.8
	Cass	10.2	1.5	Louisa	15.3	2.1
	Cedar	10.6	1.6	Lyon	15.5	2
	Cherokee	11.1	1.6	Mitchell	11.4	1.6
	Chickasaw	12.2	1.8	Montgomery	9.8	1.6
	Clay	11.6	1.8	O'Brien	12.5	1.9
	Clayton	12.5	2	Page	9.0	1.5
	Crawford	14.6	2	Poweshiek	10.4	1.6
	Delaware	11.4	1.7	Sac	15.4	2.1
	Dickinson	11.3	1.7	Shelby	11.0	1.6
	Emmet	11.8	1.9	Tama	12.3	1.9
	Floyd	10.9	1.7	Union	9.8	1.6
	Franklin	14.4	2.1	Winnebago	9.7	1.5
	Hamilton	9.5	1.4	Wright	12.0	1.9
	Hancock	11.4	1.7	<b>Total</b>	12.1	
Counties with Average Population > 20,000	Boone	9.8	1.5	Lee	9.3	1.5
	Buchanan	11.2	1.7	Mahaska	9.3	1.4
	Carroll	10.4	1.6	Marion	8.8	1.4
	Cerro Gordo	9.1	1.5	Marshall	10.5	1.6
	Clinton	8.6	1.4	Muscatine	9.8	1.4
	Des Moines	8.7	1.4	Plymouth	9.6	1.4
	Fayette	11.0	1.7	Sioux	13.7	1.9
	Henry	6.6	1.2	Wapello	9.6	1.4
	Jackson	11.5	1.8	Webster	10.1	1.4
	Jasper	9.5	1.5	Winneshiek	11.2	1.7
				<b>Total</b>	9.8	
MSA Counties	Benton	10.0	1.6	Linn	9.8	1.2
	Black Hawk	11.9	1.5	Madison	10.9	1.6
	Bremer	10.5	1.5	Mills	8.8	1.4
	Dallas	10.1	1.6	Polk	9.7	1
	Dubuque	9.4	1.5	Pottawattamie	11.1	1.6
	Grundy	12.6	1.8	Scott	9.9	1.3
	Guthrie	14.0	1.9	Story	15.8	2
	Harrison	10.0	1.6	Warren	10.2	1.5
	Johnson	12.3	1.6	Washington	11.5	1.8
	Jones	11.3	1.7	Woodbury	12.1	1.5
				<b>Total</b>	10.7	
	<b>State Total</b>	10.8				

<sup>1</sup>Based on 90% confidence intervals

Source: U.S. Census Bureau, Small Area Health Insurance Estimates





## Health Behaviors

The health of individuals and their communities is determined by a variety of factors, including biologic, environmental, social, and behavioral influences. This section provides an overview of selected surveys and statistics collected in Iowa to track the effects of these influences on the health of Iowans. Introductions are provided individually for each of the surveys with links to more detailed information on survey methodology and additional data, where available. Information on marriages and dissolutions is included at the end of this section, because it characterizes and contrasts the population dynamics that can affect health.

### QUESTIONS TO CONSIDER WHEN USING SURVEY RESULTS...

- ✓ What was the method used to conduct the survey, i.e., telephone, mail, personal interview?
- ✓ What was the response rate of those surveyed and what factors might influence who responds and who doesn't?
- ✓ Are the survey respondents representative of and thus generalizable to a particular population?
- ✓ Because a survey provides only estimates based on the sampled population, what are the variability measures of these estimates?
- ✓ Were the survey questions cross-sectional in that they represent attitudes, behaviors, or disease status of different people, or were the same people surveyed repeatedly over time?

## Behavioral Risk Factor Surveillance System (BRFSS)

The Behavioral Risk Factor Surveillance System (BRFSS) is an ongoing telephone survey that is conducted each year in every state, including Iowa, as well as in the District of Columbia, Guam, the Virgin Islands, and three territories. It is financially and technically supported by the Centers for Disease Control and Prevention (CDC) and is a scientifically-designed and validated method of collecting information.

The Iowa BRFSS collects health risk behavior information from over 6,000 household telephone surveys in both English and Spanish, and is designed to collect information on nationally agreed upon topics and on additional areas of special interest to Iowa. Because the BRFSS is ongoing, the prevalence of these behaviors may be followed longitudinally. The risk behaviors of those surveyed (Iowa residents age 18 and over) are major contributions to illness, disability, and premature death.

The goal of the Iowa BRFSS is to provide data to initiate and guide health promotion and disease prevention programs. The BRFSS program achieves this goal by:

- determining state specific prevalence of personal health behaviors related to the leading cause of premature death;
- developing the capacity of the state health department to conduct credible telephone surveys
- advancing the understanding that health-related behaviors are critical indices of health.

The BRFSS results can help inform health professionals as to health behaviors and beliefs of the general population, and can be used as a measure of the effectiveness of various public health strategies.

### BRFSS KEY AREAS...

- ✓ Health Status
- ✓ Health Care Coverage
- ✓ Physical Inactivity
- ✓ Body Weight
- ✓ Smoking
- ✓ Alcohol Consumption
- ✓ Hypertension
- ✓ Cholesterol Awareness
- ✓ Colorectal Cancer Screening
- ✓ Diabetes
- ✓ Adult Immunizations
- ✓ Injury Control
- ✓ Women's Health
- ✓ HIV/AIDS

# Iowa Behavioral Risk Factor Surveillance System 2009-2011

	Definition	Iowa		US Median <sup>1</sup>	
		2009 % (%,%) <sup>2</sup>	2010 % (%,%)	2009 %	2010 %
Binge drinking	Men having five or more or women having four or more alcoholic beverages on one or more occasions in the past month.	18.5 (16.9, 20.1)	16.9 (15.3, 18.5)	15.5	15.0
Chronic drinking	Men having an average of greater than two drinks per day or women having an average of greater than one drink per day.	5.3 (4.5, 6.1)	5.2 (4.2, 6.2)	5.1	4.9
Current smoker	All respondents smoking 100 cigarettes in their lifetime and currently smoking every day or some days.	17.2 (15.8, 18.6)	16.1 (14.7, 17.5)	17.9	17.3
Diabetes	All respondents ever being diagnosed with diabetes, excluding gestational diabetes.	7.6 (6.8, 8.4)	7.5 (6.7, 8.3)	8.4	8.7
High blood pressure	All respondents being told by a health professional that they had high blood pressure.	28.0 (26.6, 29.4)	**	28.7	**
Cholesterol	All respondents having their cholesterol checked in the past five years.	75.5 (73.7, 77.3)	**	80.6	**
High cholesterol	All respondents being told by a health professional that they had high cholesterol.	37.5 (35.9, 39.1)	**	37.4	**
No insurance coverage	All respondents who currently did not have any kind of health care coverage.	9.9 (8.7, 11.1)	10.4 (9.0, 11.8)	14.7	15.0
Mammogram	Female respondents age 40 and older having a mammogram in the past two years.	**	76.0 (74.2, 77.8)	**	75.4
Pap smear	Female respondents with a uterine cervix having a pap smear in the past three years.	**	80.6 (78.2, 83.0)	**	80.9
Obesity	All respondents who had a calculated body mass index (BMI) of 30.0 or above.	28.5 (26.9, 30.1)	29.1 (27.5, 30.7)	27.2	27.6
Overweight	All respondents who had a calculated body mass index (BMI) from 25.0 to 29.9, inclusive.	38.7 (36.9, 40.5)	37.1 (35.3, 38.9)	36.2	36.2
Sigmoidoscopy/ Colonoscopy	Respondents age 50 and over who ever had a sigmoidoscopy or colonoscopy	**	64.2 (62.4, 66.0)	**	64.4
Tested for HIV	Respondents age 18 to 64 who have ever had a HIV test, excluding for blood donations.	29.0 (27.0, 31.0)	26.8 (24.8, 28.8)	38.6	37.2
Asthma	All respondents who currently have asthma.	6.8 (6.0, 7.6)	7.8 (6.8, 8.8)	8.8	9.1
Health Status	All respondents who rate their current health as good, very good, or excellent.	88.6 (87.6, 89.6)	88.5 (87.5, 89.5)	85.4	85.0

\*\* This question was not asked in Iowa in the given year.

<sup>1</sup> In the US, half of the 50 states fall above this point, and half fall below

<sup>2</sup> 95% confidence interval for the Iowa estimate %

Source: BRFSS, Centers for Disease Control and Prevention and the Iowa Department of Public Health

## Iowa Youth Survey

The 2010 Iowa Youth Survey (IYS) was a joint project among the Iowa Department of Public Health, Division of Behavioral Health, Office of Gambling Treatment and Prevention; Division of Tobacco Use Prevention and Control; Iowa Department of Education; Iowa Department of Human Rights, Division of Criminal & Juvenile Justice Planning; Iowa Governor's Office of Drug Control Policy; and the Iowa Governor's Office of Drug Control Policy. A report on the IYS was prepared by the Iowa Consortium for Substance Abuse Research and Education at the University of Iowa.

**Survey scope.** The 2010 IYS is the 13<sup>th</sup> in a series of youth surveys that have been completed every two or three years since 1975. The 1999, 2002, 2005, 2008, and 2010 surveys differ from previous years in both the procedures used to implement the survey and the students who were asked to participate. Previous surveys were given to approximately one-third of Iowa's public school districts and were a sample of their 6<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup> and 12<sup>th</sup> grade students. Starting with the 1999 IYS, participation was sought from all public and non-public school districts and all students in grades 6, 8 and 11, as well as 14-18 year-old students in alternative programs. These changes make it possible to provide youth development-related data for each participating school, as well as for each county in which participating students reside. They also make it more feasible to use IYS results to assess the outcome of community and school youth development programs. The changes do, however, restrict direct comparisons with surveys prior to 1999 to grades 6 and 8, and to the schools that participated in those surveys.

Starting with the 2002 IYS, participation was also sought from all non-public schools in the state, in addition to all of the public school districts. It was believed that by including all Iowa students in the 6<sup>th</sup>, 8<sup>th</sup> and 11<sup>th</sup> grades, the survey results would more accurately reflect the attitudes and perceptions of all Iowa students in those grades, not just those attending public schools. These non-public school data have been included in this report.

The 2010 survey questionnaires were completed in 307 of Iowa's 359 public school districts (86%) and from 31 of 183 non-public schools (17%), including one regent's institution, for students enrolled in the 6<sup>th</sup>, 8<sup>th</sup> and/or 11<sup>th</sup> grades. A total of 78,382 students across the state completed the IYS, with nearly all counties represented by at least 200 students. The survey participation decreased from 83.5% in 2008 to 68.1% in 2010. This decrease was largely due to changes in funding mechanisms that reduced the incentive for school districts to participate.

### LEVEL OF PARTICIPATION... 2010

Grade	Number Enrolled	Number Completed IYS	Percent Completed IYS
6	37,893	26,856	70.9%
8	37,663	27,115	72.0%
11	38,354	23,657	61.7%

The 2008 and 2010 surveys were administered online using Survey Monkey. This was found to be more adaptable for students and will be continued.

**Survey content.** The 2010 IYS questionnaire includes questions about the students' behaviors and attitudes/beliefs, as well as their perceptions of their peer, family, school and neighborhood/community environments. Prior research has shown that each of these environments plays a significant role in positive youth development. Selection of specific survey questions was based on a combination of: 1) analysis of data collected in previous Iowa Youth Surveys; 2) a literature review of the established youth development models, especially those that enjoy some acceptance in Iowa; and 3) discussion sessions with youth development professionals (community service providers, school district personnel and academicians).

The general content of the questions included in the 2010 IYS is similar to that of previous surveys. Most of the items are relevant to the constructs on which previous IYS were based. Some questions and responses from the 2008 IYS were removed and several new questions added. Among the new additions were questions eliciting additional, more detailed information on gambling, nutrition, and exercise, as well as information regarding parental involvement in the military, students receiving accommodation under Section 504, students with Individualized Education Plans, and students receiving special education services. Suicide questions were also changed to be age-appropriate. Students were automatically directed to appropriate questions according to grade level.

The appropriateness of any comparison between the 2010 IYS to surveys from previous years must be considered on a question-by-question basis. Trend analyses for the most part should be considered exploratory at best. If comparisons are made, the 2005, 2008 and 2010 reports may make the state *appear* to be significantly different, for better or worse, from the reports generated by previous surveys. This appearance may be due to differences in question wording between the 2005/2008/2010 reports and all previous reports and the representativeness of the samples rather than to actual changes in Iowa's youth. The charts in the following section contain data from the full IYS report which can be found at [www.iowayouthsurvey.org](http://www.iowayouthsurvey.org). The question numbers are in parentheses.

## Iowa Youth Survey (IYS) 2010

Substance Use Behaviors	Definition	Grade % <sup>1</sup>			
		6 <sup>th</sup>	8 <sup>th</sup>	11 <sup>th</sup>	% <sup>2</sup> State
Tobacco	Percentage of students who reported smoking cigarettes during the past 30 days. (B28)	1	5	16	8
	Percentage of students who reported smoking cigars during the past 30 days. (B29)	1	2	9	4
	Percentage of students who reported using smokeless tobacco during the past 30 days. (B39)	1	2	9	4
Alcohol	Percentage of students who reported having 1 or more alcoholic drinks during the past 30 days. (B30)	4	13	32	17
	Percentage of students who reported having 5 or more alcoholic drinks in a row, within a couple of hours, during the past 30 days. (B26)	2	8	24	12
Marijuana	Percentage of students who reported using marijuana during the past 30 days. (B31)	1	4	13	6
Inhalants	Percentage of students who reported sniffing glue, breathing the contents of gases or sprays in order to get high during the past 30 days. (B32)	2	3	2	3
Methamphetamines	Percentage of students who reported using methamphetamines during the past 30 days. (B33)	0	1	1	1
Cocaine	Percentage of students who reported using cocaine during the past 30 days. (B34)	1	1	2	1
Amphetamines	Percentage of students who reported using amphetamines (other than methamphetamines) during the past 30 days. (B35)	0	0	3	1
Steroid Pills/Shots	Percentage of students who reported taking steroid pills or shots without a doctor's prescription during the past 30 days. (B40)	1	1	2	1
Other Illegal Drugs	Percentage of students who reported using any other illegal drug during the past 30 days. (B41)	0	1	2	1
Prescription Medications	Percent of students who reported using prescription medications that were not prescribed for them. (B36)	2	3	7	4

%<sup>1</sup> Unweighted Percentage%<sup>2</sup> Weighted Percentage

Source: Iowa Dept. of Public Health, Div. of Health Promotion, Prevention, and Addictive Behaviors

## Iowa Youth Survey 2010 (continued)

	Definition		Grade % <sup>1</sup>			% <sup>2</sup> State
			6 <sup>th</sup>	8 <sup>th</sup>	11 <sup>th</sup>	
Attitudes about self	I am accepting of those different than me (racially, culturally, socio-economically). (C4)	Strongly Agree	66	63	56	62
		Agree	29	33	38	34
		Disagree	3	3	4	3
		Strongly Disagree	1	1	2	2
	I can say "no" when someone wants me to do things I know are wrong or dangerous. (C6)	Strongly Agree	79	67	59	68
		Agree	17	27	34	26
		Disagree	2	5	5	4
		Strongly Disagree	2	2	2	2
Attitudes about alcohol	Violence is the worst way to solve problems (C8)	Strongly Agree	62	43	36	47
		Agree	25	34	38	32
		Disagree	7	16	20	14
		Strongly Disagree	6	7	6	6
	It is against my values to have sex as a teenager. (9)	Strongly Agree	71	51	20	46
		Agree	16	26	22	21
		Disagree	7	15	36	19
		Strongly Disagree	6	8	22	13
	It is against my values to use alcohol and drugs as a teenager. (C11)	Strongly Agree	82	65	34	60
		Agree	11	21	26	20
		Disagree	3	9	28	14
		Strongly Disagree	4	4	11	7
	Have you ever tried to kill yourself? (Grades 6 and 8 only-not comparable to previous years) (B82)	Percentage answering YES	3	6	xx	5
	How much do you think you risk harming yourself (physically or otherwise) if you: drink 3 or more drinks (glasses, cans, or bottles of beer; wine; liquor or mixed drinks) of alcohol nearly every day? (C18)	Great Risk	61	64	53	52
		Moderate Risk	11	16	23	16
		Slight Risk	4	7	13	8
		No Risk	15	8	8	10
		Don't Know	8	5	3	5
Attitudes about school	How wrong would your parents/guardians feel it would be for you to go to a party where kids under 21 were using alcohol? (F13)	Very Wrong	92	83	60	78
		Wrong	4	10	21	12
		A Little Wrong	1	4	14	7
		Not Wrong at All	1	2	4	2
		Don't Know	1	1	2	1
	Would you be more or less likely to be popular (respected or cool) with the other students in your school if you drank alcoholic beverages? (D2)	A Lot More Popular	3	4	10	6
		More Popular	5	9	25	13
		Less Popular	14	20	12	15
		A Lot Less Popular	51	39	10	33
		Wouldn't Change My Popularity	27	28	43	33
	There are clear rules about what students can and cannot do. (E1)	Strongly Agree	65	48	35	49
		Agree	30	43	53	42
		Disagree	4	7	9	7
		Strongly Disagree	2	2	2	2

%<sup>1</sup> Unweighted Percentage%<sup>2</sup> Weighted Percentage

Source: Iowa Dept. of Public Health, Div. of Health Promotion, Prevention, &amp; Addictive Behaviors

## Iowa Youth Survey 2010 (continued)

	Definition		Grade % <sup>1</sup>			% <sup>2</sup> State
			6 <sup>th</sup>	8 <sup>th</sup>	11 <sup>th</sup>	
Attitudes about school (continued)	Students caught drinking, smoking, or using an illegal drug are not allowed to participate in any extracurricular activity for some time period. (E4)	Strongly Agree	79	67	52	66
		Agree	14	24	36	25
		Disagree	3	5	8	5
		Strongly Disagree	3	3	4	4
	If I skipped school at least one of my parents/guardians would be notified. (E3)	Strongly Agree	68	56	45	56
		Agree	22	33	43	33
		Disagree	6	7	9	7
		Strongly Disagree	4	3	3	3
	Students in my school treat each other with respect. (E19)	Strongly Agree	31	19	12	21
		Agree	41	39	40	40
		Disagree	21	28	35	28
		Strongly Disagree	7	13	13	11
	I feel safe at school. (E20)	Strongly Agree	56	39	30	41
		Agree	35	47	59	47
		Disagree	6	9	8	8
		Strongly Disagree	3	5	3	4
	There is at least one adult at school who I could go to for help with a problem. (E26)	Strongly Agree	70	52	43	54
		Agree	23	34	43	34
		Disagree	4	8	10	7
		Strongly Disagree	3	6	5	5
Attitudes about family	In my home there are clear rules about what I can and cannot do. (F1)	Strongly Agree	68	57	46	53
		Agree	27	35	43	35
		Disagree	4	6	9	6
		Strongly Disagree	1	2	2	2
	I have a happy home. (F2)	Strongly Agree	66	54	45	55
		Agree	27	34	41	34
		Disagree	6	9	11	8
		Strongly Disagree	2	4	4	3
	There are people living in my home who have a serious alcohol or drug problem. (F3)	Strongly Agree	11	10	8	9
		Agree	7	8	9	8
		Disagree	16	18	21	19
		Strongly Disagree	66	64	63	64
	I can get help and support when I need it from someone in my home. (F6)	Strongly Agree	74	60	49	61
		Agree	20	29	38	29
		Disagree	3	6	9	6
		Strongly Disagree	3	4	5	4
	A parent/guardian knows where I am and who I am with, especially in the evening and on weekends. (F7)	Never	5	5	5	5
		Sometimes	7	13	21	14
		Often	17	24	32	25
		Always	70	58	42	56
Attitudes about community	My neighborhood is a safe place to live. (G18)	Strongly Agree	62	55	51	56
		Agree	31	37	42	37
		Disagree	5	6	5	5
		Strongly Disagree	2	3	2	2

%<sup>1</sup> Unweighted Percentage%<sup>2</sup> Weighted Percentage

Source: Iowa Dept. of Public Health, Div. of Health Promotion, Prevention, and Addictive Behaviors



## Iowa Youth Survey 2010 (continued)

	Definition		Grade % <sup>1</sup>			% <sup>2</sup> State
			6 <sup>th</sup>	8 <sup>th</sup>	11 <sup>th</sup>	
Attitudes about community (continued)	Adults in my neighborhood or community help me when I need help. (G25)	Strongly Agree	51	36	22	36
		Agree	32	37	44	38
		Disagree	12	18	23	18
		Strongly Disagree	6	9	11	9
	In your neighborhood or community how difficult do you think it would be for a kid your age to get...					
	...cigarettes (G1)	Very hard	54	33	12	32
		Hard	20	26	15	20
		Easy	9	20	36	22
		Very Easy	4	9	28	14
		Don't know	14	11	8	11
	...alcoholic beverages (beer, wine, liquor). (G2)	Very hard	52	30	10	30
		Hard	20	24	14	19
		Easy	10	24	40	25
		Very Easy	4	11	29	15
		Don't know	14	11	7	10
	...marijuana (pot, grass, hash, bud, weed). (G3)	Very hard	68	49	19	45
		Hard	12	20	19	17
		Easy	4	11	29	15
		Very Easy	2	7	21	11
		Don't know	14	13	12	13
	...methamphetamines (crack, ice). (G4)	Very hard	70	54	33	52
		Hard	10	20	29	20
		Easy	3	6	12	7
		Very Easy	2	4	6	4
		Don't know	15	15	19	16
	...amphetamines other than methamphetamines (like stimulants, uppers, speed). (G5)	Very hard	69	55	34	52
		Hard	11	19	27	19
		Easy	3	6	13	8
		Very Easy	2	4	7	4
		Don't know	15	15	19	17
	... any other illegal drug (cocaine, etc.). (G6)	Very hard	69	55	33	52
		Hard	11	20	27	19
		Easy	4	7	14	9
		Very Easy	2	4	7	5
		Don't know	14	14	19	16
	...a handgun. (G7)	Very hard	59	45	30	44
		Hard	16	24	27	23
		Easy	6	12	17	12
		Very Easy	4	6	9	6
		Don't know	14	13	16	15

%<sup>1</sup> Unweighted Percentage%<sup>2</sup> Weighted Percentage

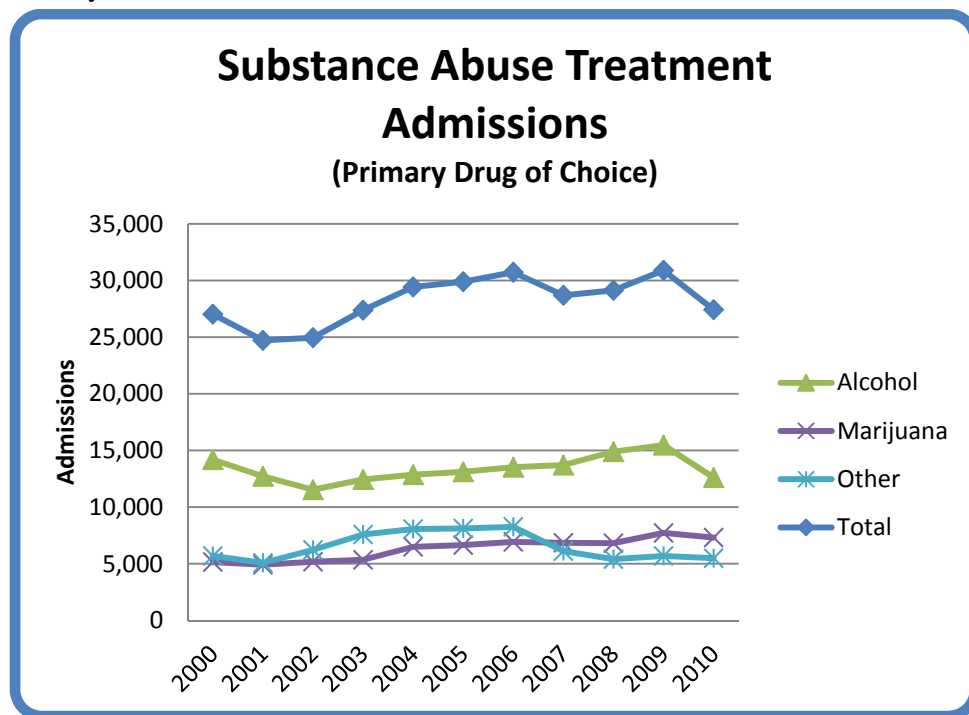
Source: Iowa Dept. of Public Health, Div. of Health Promotion, Prevention, and Addictive Behaviors

## Substance Abuse Treatment

The Iowa Department of Public Health (IDPH) licenses 112 substance abuse assessment and treatment programs in Iowa. These programs provide services to approximately 46,000 Iowans – men and women, adults and juveniles – every year. The majority of the programs accept Medicaid or commercial insurance as payment for services.

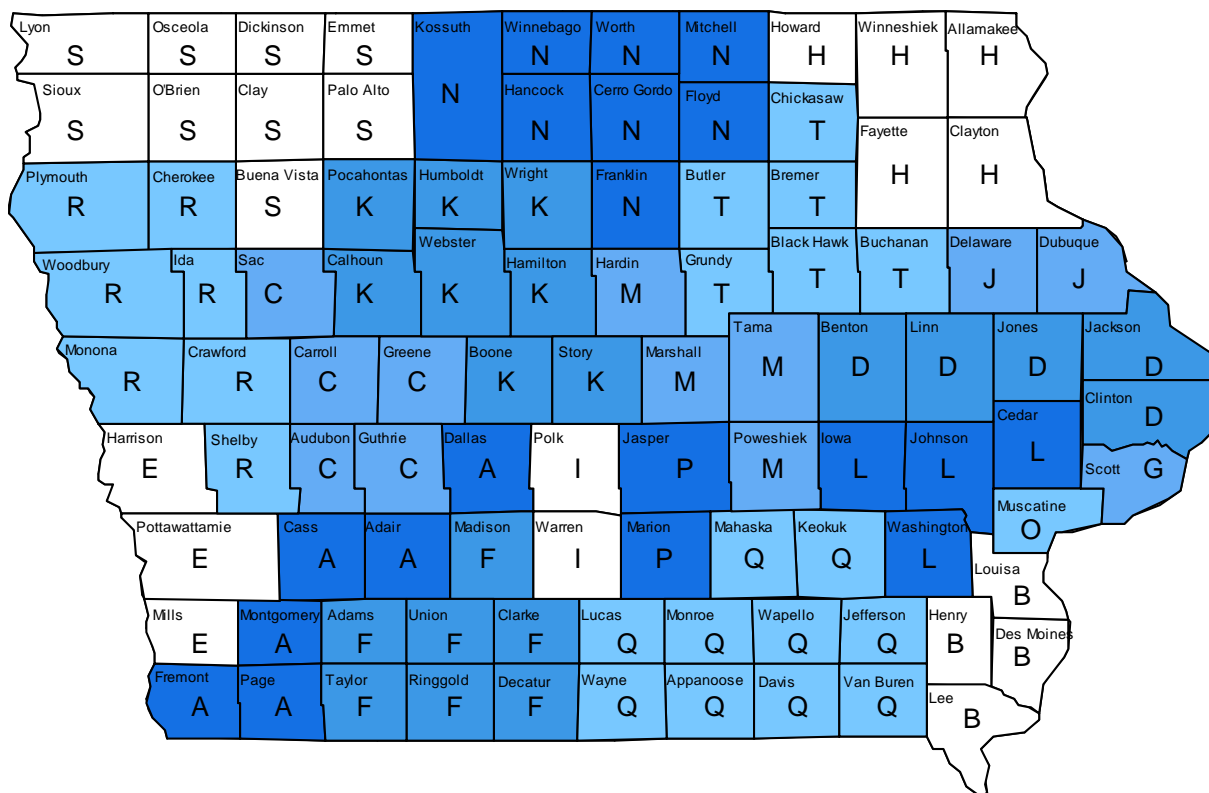
Each year, “IDPH funding” – a combination of State General Fund appropriations and the federal Substance Abuse Prevention and Treatment Block Grant – supports substance abuse treatment for more than 17,000 Iowans who don’t have insurance, Medicaid, or other resources to pay for treatment. IDPH-funded substance abuse treatment is part of the Iowa Plan for Behavioral Health, along with Medicaid funding for mental health and substance abuse services. The Iowa Plan is administered by Magellan Behavioral Care of Iowa. In 2009, an Iowa Plan RFP was released to competitively select a *limited panel of licensed treatment programs* to provide IDPH-funded substance abuse treatment from January 2010 through June 2014. Twenty-three programs – all local community-based organizations – were selected to assure *outpatient treatment* to residents of all 99 Iowa counties through *20 geographic service areas* (see map on next page). Eleven of the 23 programs also provide *statewide residential treatment* for adults or juveniles and ten of the programs provide specialized *Women and Children* services.

The chart below shows Iowa substance abuse treatment admissions, sorted by primary drug of choice, for calendar years 2001-2010.



More information on all of Iowa’s licensed substance abuse treatment programs and locations can be found at: <http://www.drugfreeinfo.org/php/srchdir.html> or by calling IDPH’s Helpline at 1-866-242-4111.

## IDPH Funded Substance Abuse Treatment Service Areas and Providers



Outpatient Service Area	Provider	Outpatient Service Area	Provider
<b>A</b>	Zion Recovery Services, Atlantic (1)	<b>J</b>	Substance Abuse Services Center (SASC), Dubuque (5)
<b>B</b>	Alcohol and Drug Dependency Services (ADDS), Burlington (1)	<b>K</b>	Community and Family Resources, (CFR) Fort Dodge
<b>C</b>	New Opportunities, Carroll	<b>L</b>	MECCA Services, Iowa City (1,5)
<b>D</b>	Area Substance Abuse Council (ASAC), Cedar Rapids (1,2,5)	<b>M</b>	Substance Abuse Treatment Unit of Central Iowa (SATUCI),
<b>E</b>	Heartland Family Service, Council Bluffs (1,5,6)	<b>N</b>	Prairie Ridge Addiction Treatment Services, Mason City
<b>F</b>	Crossroads Mental Health Center,	<b>O</b>	Trinity Muscatine-New Horizons,
<b>G</b>	Center for Alcohol & Drug Services (CADS), Davenport (1,3,4,5,6)	<b>P</b>	House of Mercy, Des Moines
<b>H</b>	North East Iowa Behavioral Health,		United Community Services
<b>I</b>	Broadlawns Medical Center, Des	<b>Q</b>	SIEDA, Ottumwa
	Employee and Family Resources	<b>R</b>	Jackson Recovery Centers, Sioux
	House of Mercy, Des Moines (5)	<b>S</b>	Compass Pointe, Spencer
	MECCA Services, Des Moines (1,5)	<b>T</b>	Pathways Behavioral Services,
	United Community Services (UCS),		Youth and Shelter Services (YSS),
<b>Specialized Treatment Services</b>			
1 – Adult Residential Services 2 – Juvenile Residential Services		3 – Culturally Competent Program 4 – Jail-Based Treatment Program	
		5 – Women and Children Program 6 – Onond Treatment	

Source: Iowa Department of Public Health, Div. of Behavioral Health

# Marriages 2008-2009

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )
Counties with Average Population < 10,000	Adair	86	5.8 (79)	Lucas	115	6.2 (68)
	Adams	38	4.8 (95)	Monona	116	6.5 (54)
	Audubon	79	6.5 (53)	Monroe	93	6.1 (69)
	Clarke	145	8.0 (11)	Osceola	80	6.3 (64)
	Davis	115	6.7 (42)	Palo Alto	126	6.8 (39)
	Decatur	109	6.6 (46)	Pocahontas	85	5.7 (84)
	Fremont	101	6.8 (34)	Ringgold	58	5.8 (77)
	Greene	104	5.6 (87)	Taylor	97	7.6 (16)
	Howard	123	6.5 (52)	Van Buren	139	9.0 (04)
	Humboldt	156	8.2 (10)	Wayne	78	6.2 (66)
	Ida	87	6.4 (58)	Worth	102	6.7 (40)
				<b>Total</b>	2,232	6.7
Counties with Average Population 10,000 – 20,000	Allamakee	212	7.4 (19)	Hardin	227	6.6 (49)
	Appanoose	238	9.3 (03)	Iowa	218	6.9 (32)
	Buena Vista	298	7.6 (17)	Jefferson	194	6.3 (63)
	Butler	175	6.0 (72)	Keokuk	116	5.5 (88)
	Calhoun	113	5.8 (80)	Kossuth	191	6.3 (62)
	Cass	176	6.4 (56)	Louisa	90	3.9 (99)
	Cedar	170	4.7 (96)	Lyon	142	6.4 (59)
	Cherokee	153	6.7 (43)	Mitchell	116	5.4 (90)
	Chickasaw	570	23.7 (01)	Montgomery	163	7.6 (18)
	Clay	218	6.6 (50)	O'Brien	160	5.8 (82)
	Clayton	257	7.3 (20)	Page	154	5.0 (93)
	Crawford	205	6.2 (65)	Poweshiek	217	5.9 (75)
	Delaware	286	8.3 (08)	Sac	142	7.0 (29)
	Dickinson	368	11.1 (02)	Shelby	139	5.8 (81)
	Emmet	128	6.2 (67)	Tama	200	5.7 (85)
	Floyd	194	6.1 (71)	Union	206	8.4 (05)
	Franklin	93	4.4 (97)	Winnebago	130	6.1 (70)
	Hamilton	208	6.8 (38)	Wright	107	4.2 (98)
	Hancock	128	5.7 (83)	<b>Total</b>	7,102	6.9
Counties with Average Population > 20,000	Boone	410	7.8 (13)	Lee	564	8.0 (12)
	Buchanan	300	7.2 (24)	Mahaska	293	6.6 (45)
	Carroll	293	7.1 (25)	Marion	476	7.3 (22)
	Cerro Gordo	683	7.8 (15)	Marshall	550	7.0 (30)
	Clinton	677	6.9 (31)	Muscatine	613	7.2 (23)
	Des Moines	563	6.9 (33)	Plymouth	319	6.6 (48)
	Fayette	219	5.4 (89)	Sioux	451	7.0 (28)
	Henry	240	6.0 (73)	Wapello	583	8.3 (09)
	Jackson	251	6.3 (60)	Webster	516	6.7 (41)
	Jasper	407	5.6 (86)	Winneshek	290	7.0 (27)
				<b>Total</b>	8,698	7.0
MSA Counties	Benton	257	4.8 (94)	Linn	2,429	5.8 (78)
	Black Hawk	1,638	6.4 (57)	Madison	218	7.1 (26)
	Bremer	298	6.3 (61)	Mills	253	8.4 (06)
	Dallas	799	6.6 (51)	Polk	5,816	6.8 (37)
	Dubuque	1,555	8.4 (07)	Pottawattamie	1,413	7.8 (14)
	Grundy	127	5.2 (91)	Scott	2,408	7.3 (21)
	Guthrie	149	6.8 (35)	Story	1,143	6.6 (47)
	Harrison	159	5.2 (92)	Warren	615	6.8 (36)
	Johnson	1,669	6.4 (55)	Washington	283	6.7 (44)
	Jones	241	5.9 (74)	Woodbury	1,203	5.9 (76)
				<b>Total</b>	22,673	6.7
<b>State Total</b>		40,705	6.8			

<sup>1</sup>Rates per 1,000 population<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics

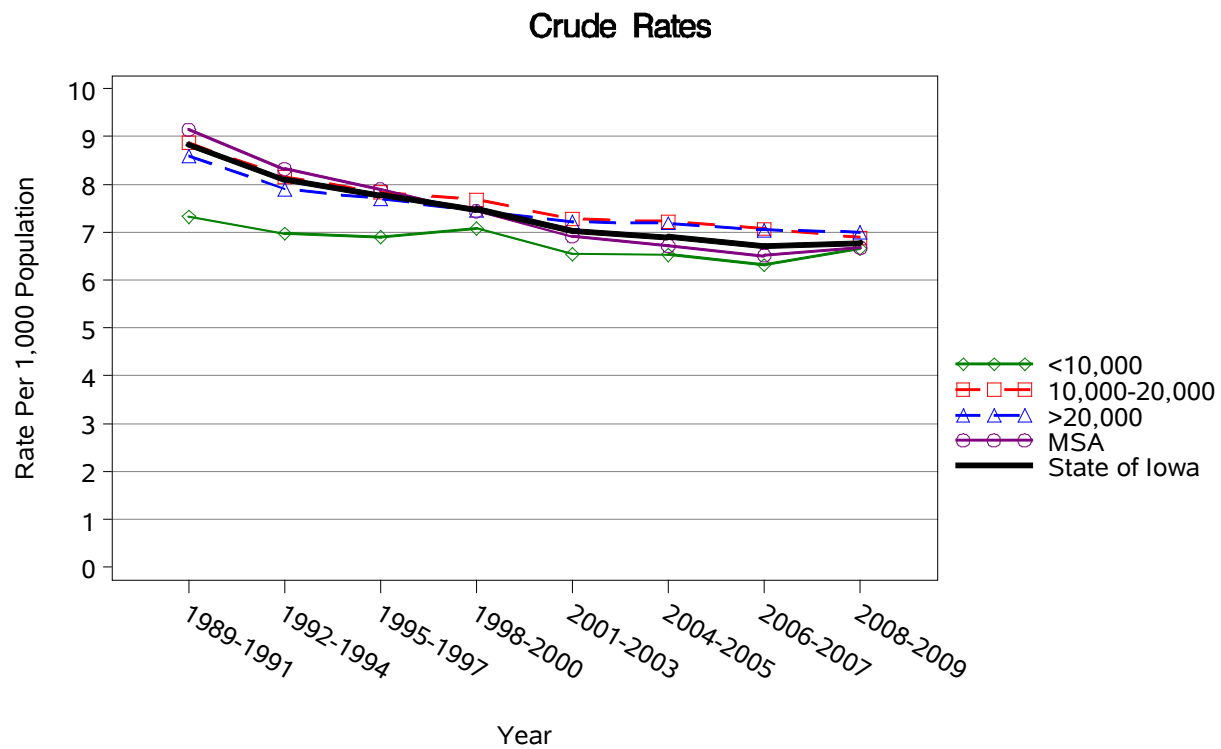
# Dissolutions 2008-2009

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )
Counties with Average Population < 10,000	Adair	34	2.3 (67)	Lucas	55	3.0 (32)
	Adams	32	4.0 (01)	Monona	61	3.4 (15)
	Audubon	34	2.8 (44)	Monroe	27	1.8 (83)
	Clarke	41	2.3 (71)	Osceola	33	2.6 (57)
	Davis	46	2.7 (53)	Palo Alto	51	2.7 (50)
	Decatur	32	1.9 (80)	Pocahontas	40	2.7 (52)
	Fremont	55	3.7 (08)	Ringgold	26	2.6 (55)
	Greene	65	3.5 (12)	Taylor	29	2.3 (68)
	Howard	49	2.6 (56)	Van Buren	47	3.1 (30)
	Humboldt	59	3.1 (27)	Wayne	42	3.3 (17)
	Ida	43	3.1 (24)	Worth	16	1.1 (98)
				<b>Total</b>	917	2.7
Counties with Average Population 10,000 – 20,000	Allamakee	62	2.2 (73)	Hardin	109	3.2 (22)
	Appanoose	34	1.3 (94)	Iowa	69	2.2 (72)
	Buena Vista	112	2.9 (40)	Jefferson	118	3.8 (06)
	Butler	73	2.5 (61)	Keokuk	61	2.9 (38)
	Calhoun	35	1.8 (82)	Kossuth	88	2.9 (35)
	Cass	80	2.9 (34)	Louisa	66	2.9 (37)
	Cedar	86	2.4 (65)	Lyon	47	2.1 (74)
	Cherokee	32	1.4 (93)	Mitchell	43	2.0 (78)
	Chickasaw	43	1.8 (84)	Montgomery	80	3.7 (09)
	Clay	92	2.8 (47)	O'Brien	80	2.9 (39)
	Clayton	61	1.7 (85)	Page	95	3.1 (28)
	Crawford	90	2.7 (49)	Poweshiek	129	3.5 (13)
	Delaware	78	2.3 (70)	Sac	76	3.8 (07)
	Dickinson	109	3.3 (20)	Shelby	81	3.4 (16)
	Emmet	47	2.3 (69)	Tama	71	2.0 (77)
	Floyd	65	2.0 (76)	Union	97	4.0 (03)
	Franklin	42	2.0 (79)	Winnebago	60	2.8 (43)
	Hamilton	105	3.4 (14)	Wright	71	2.8 (46)
	Hancock	29	1.3 (96)	<b>Total</b>	2,716	2.6
Counties with Average Population > 20,000	Boone	166	3.2 (21)	Lee	181	2.6 (59)
	Buchanan	64	1.5 (92)	Mahaska	139	3.2 (23)
	Carroll	119	2.9 (36)	Marion	251	3.8 (05)
	Cerro Gordo	274	3.1 (25)	Marshall	237	3.0 (31)
	Clinton	165	1.7 (89)	Muscatine	332	3.9 (04)
	Des Moines	83	1.0 (99)	Plymouth	83	1.7 (86)
	Fayette	102	2.5 (60)	Sioux	109	1.7 (88)
	Henry	103	2.6 (58)	Wapello	259	3.7 (11)
	Jackson	112	2.8 (42)	Webster	254	3.3 (19)
	Jasper	97	1.3 (95)	Winneshek	69	1.7 (90)
				<b>Total</b>	3,199	2.6
MSA Counties	Benton	109	2.0 (75)	Linn	1,037	2.5 (62)
	Black Hawk	417	1.6 (91)	Madison	96	3.1 (26)
	Bremer	86	1.8 (81)	Mills	111	3.7 (10)
	Dallas	302	2.5 (63)	Polk	2,077	2.4 (64)
	Dubuque	520	2.8 (45)	Pottawattamie	722	4.0 (02)
	Grundy	64	2.6 (54)	Scott	915	2.8 (48)
	Guthrie	67	3.1 (29)	Story	294	1.7 (87)
	Harrison	87	2.8 (41)	Warren	244	2.7 (51)
	Johnson	320	1.2 (97)	Washington	142	3.3 (18)
	Jones	121	3.0 (33)	Woodbury	474	2.3 (66)
				<b>Total</b>	8,205	2.4
<b>State Total</b>		15,037	2.5			

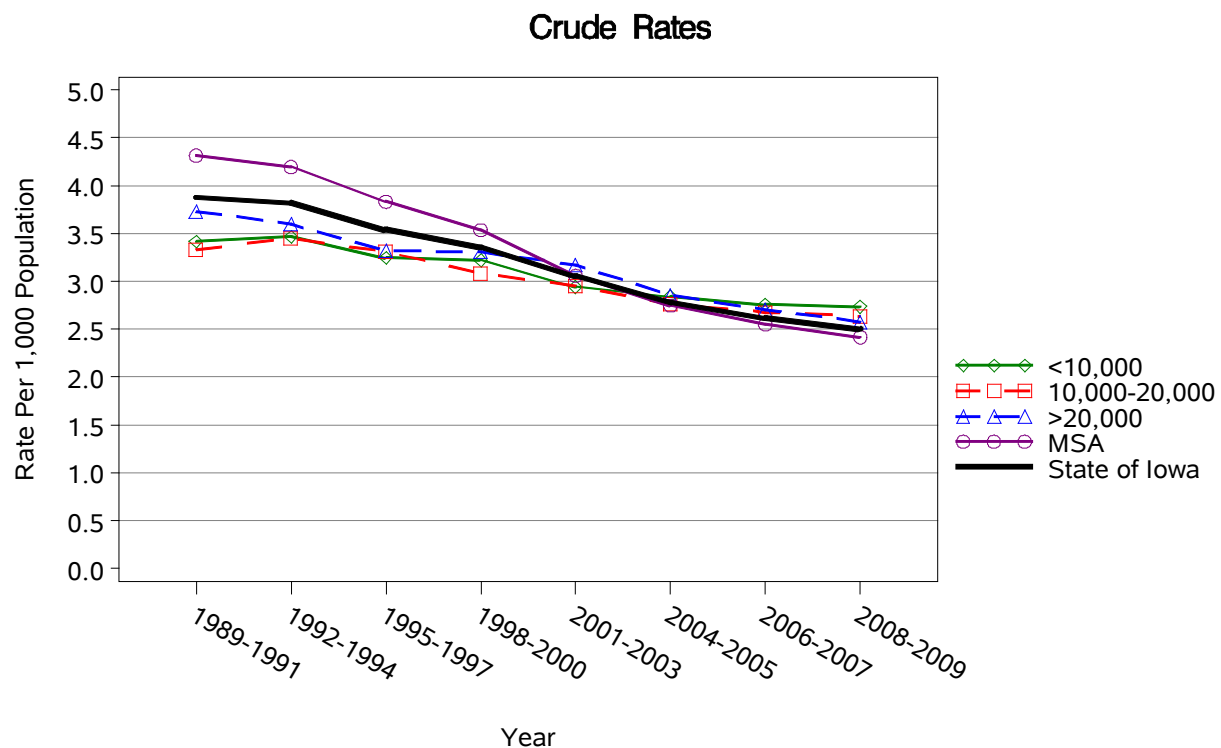
<sup>1</sup>Rates per 1,000 population<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics

## Marriages 1989-2009



## Dissolutions 1989-2009



# Prenatal and Infant Health

Each year families across the United States bring home a healthy baby who has all the potential for a full and productive life. However, some families will suffer the loss of their child soon after birth.

Infant morbidity and mortality are critical indicators of the health of a population. Low birth weight and preterm birth result in a significant loss of life; surviving infants often sustain residual injuries that affect quality of life, and there is substantial financial cost to individuals and to society in caring for these children.

## IN AN AVERAGE WEEK IN IOWA<sup>1</sup>

- ✓ 774 babies are born.
- ✓ 51 babies are born with low birth weight.
- ✓ 89 babies are born preterm.
- ✓ 4 babies die before their first birthday.

Certain factors have proven to increase the likelihood of delivering a low birth weight or preterm infant, such as (1) multiple births; (2) cigarette smoking during pregnancy; (3) substance abuse immediately prior to conception and during pregnancy (including alcohol abuse); (4) maternal age extremes; and (5) short inter-pregnancy interval.

## IN IOWA IN 2008

- ✓ 3.7% of all live births were multiple births.
- ✓ 29.3 % of all live births were cesarean deliveries
- ✓ About 4.5% of live births was born to a woman receiving late or no prenatal care.

Birth defects rank as the leading cause of mortality in full-term newborn babies in the United States. Iowa's overall birth defect rate is approximately 4.6% of all births. The state of Iowa has taken a leadership role in birth defect surveillance and serves as a model to other states. Iowa has also

partnered with the March of Dimes' Folic Acid education campaign and the Preterm Birth Prevention campaign. Adequate folic acid intake by women of reproductive years has been demonstrated to decrease the risk of neural tube defects in children. Early prenatal care for mothers and health education to women and medical providers allow for a healthier pregnancy and improved birth outcomes.

Interventions need to focus on providing preconceptional health care to women, early and comprehensive prenatal care, and family support that includes promotion of healthy lifestyles.

<sup>1</sup>Source: March of Dimes perinatal statistics: [www.marchofdimes.com/peristats](http://www.marchofdimes.com/peristats)



<sup>1</sup>Rates per 1,000 population  
<sup>2</sup>Rank among 99 Iowa counties

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# Out-of-Wedlock Births 2008-2009

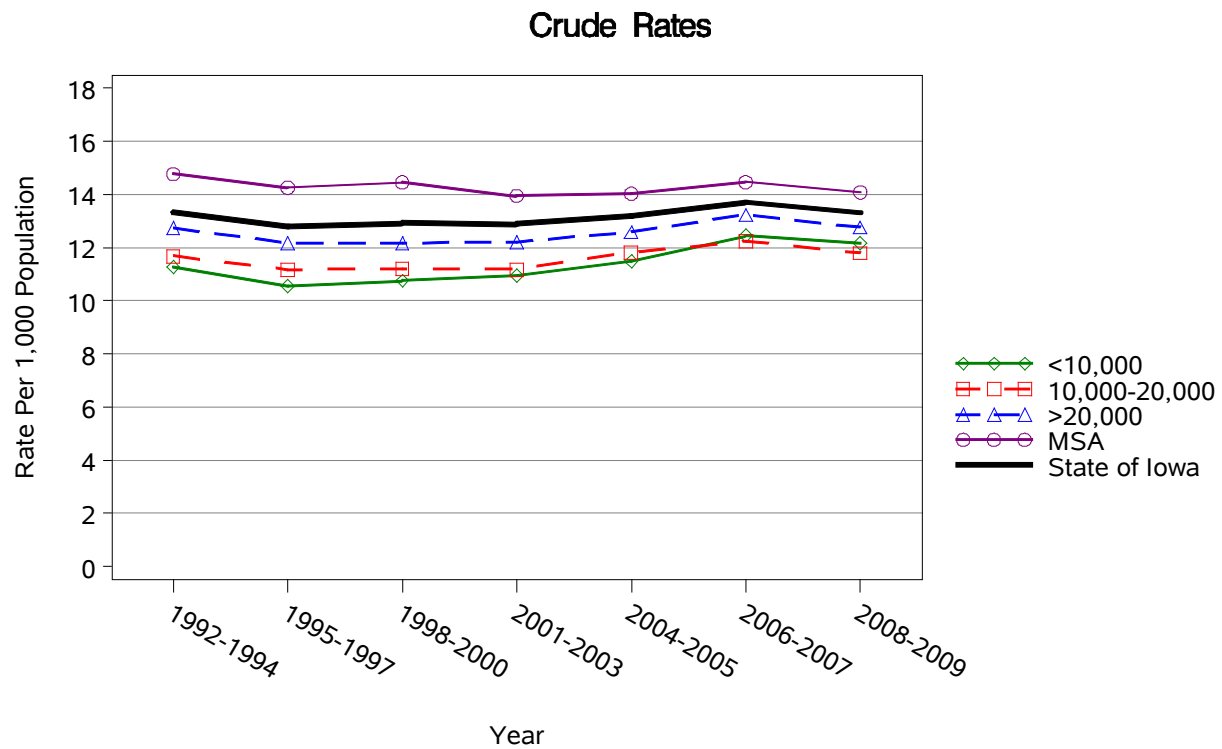
	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )
Counties with Average Population < 10,000	Adair	48	315.8 (61)	Lucas	70	348.3 (50)
	Adams	29	315.2 (62)	Monona	63	353.9 (47)
	Audubon	59	401.4 (25)	Monroe	74	413.4 (20)
	Clarke	122	432.6 (16)	Osceola	58	408.5 (22)
	Davis	50	175.4 (98)	Palo Alto	73	342.7 (53)
	Decatur	77	346.8 (52)	Pocahontas	61	388.5 (31)
	Fremont	69	381.2 (34)	Ringgold	30	236.2 (88)
	Greene	76	370.7 (36)	Taylor	37	300.8 (68)
	Howard	70	263.2 (77)	Van Buren	37	198.9 (94)
	Humboldt	79	369.2 (38)	Wayne	48	298.1 (72)
	Ida	64	338.6 (55)	Worth	52	298.9 (71)
				<b>Total</b>	1,346	330.2
Counties with Average Population 10,000 – 20,000	Allamakee	121	324.4 (58)	Hardin	154	390.9 (29)
	Appanoose	118	357.6 (43)	Iowa	95	233.4 (90)
	Buena Vista	256	444.4 (09)	Jefferson	114	371.3 (35)
	Butler	81	238.2 (86)	Keokuk	76	319.3 (60)
	Calhoun	82	367.7 (39)	Kossuth	92	296.8 (73)
	Cass	122	358.8 (42)	Louisa	109	443.1 (11)
	Cedar	117	275.9 (76)	Lyon	37	113.5 (99)
	Cherokee	84	362.1 (41)	Mitchell	46	190.9 (96)
	Chickasaw	75	258.6 (78)	Montgomery	93	390.8 (30)
	Clay	163	398.5 (27)	O'Brien	119	348.0 (51)
	Clayton	121	299.5 (70)	Page	151	408.1 (23)
	Crawford	208	442.6 (12)	Poweshiek	133	354.7 (46)
	Delaware	110	284.2 (74)	Sac	52	246.4 (83)
	Dickinson	106	305.5 (63)	Shelby	77	324.9 (57)
	Emmet	113	450.2 (07)	Tama	188	428.2 (19)
	Floyd	138	370.0 (37)	Union	134	446.7 (08)
	Franklin	101	387.0 (33)	Winnebago	98	410.0 (21)
	Hamilton	153	433.4 (15)	Wright	155	465.5 (06)
	Hancock	54	241.1 (85)	<b>Total</b>	4,246	349.2
Counties with Average Population > 20,000	Boone	183	300.5 (69)	Lee	389	477.3 (03)
	Buchanan	148	243.8 (84)	Mahaska	203	349.4 (48)
	Carroll	151	280.7 (75)	Marion	211	257.0 (79)
	Cerro Gordo	400	400.4 (26)	Marshall	481	395.9 (28)
	Clinton	520	435.1 (14)	Muscatine	551	444.4 (10)
	Des Moines	495	473.7 (04)	Plymouth	189	301.0 (67)
	Fayette	180	366.6 (40)	Sioux	206	196.6 (95)
	Henry	181	387.6 (32)	Wapello	461	470.9 (05)
	Jackson	167	407.3 (24)	Webster	471	501.1 (01)
	Jasper	283	341.0 (54)	Winneshiek	96	247.4 (82)
				<b>Total</b>	5,966	376.5
MSA Counties	Benton	151	252.1 (81)	Linn	2,005	348.9 (49)
	Black Hawk	1,512	429.5 (17)	Madison	89	212.9 (92)
	Bremer	108	209.7 (93)	Mills	125	356.1 (45)
	Dallas	381	186.8 (97)	Polk	4,527	337.5 (56)
	Dubuque	872	357.2 (44)	Pottawattamie	1,114	437.5 (13)
	Grundy	67	234.3 (89)	Scott	1,962	429.5 (18)
	Guthrie	74	302.0 (66)	Story	459	230.4 (91)
	Harrison	117	324.1 (59)	Warren	276	255.3 (80)
	Johnson	813	237.0 (87)	Washington	164	304.8 (64)
	Jones	133	303.7 (65)	Woodbury	1,586	484.7 (02)
				<b>Total</b>	16,535	345.9
<b>State Total</b>		28,093	351.7			

<sup>1</sup>Rates per 1,000 live births

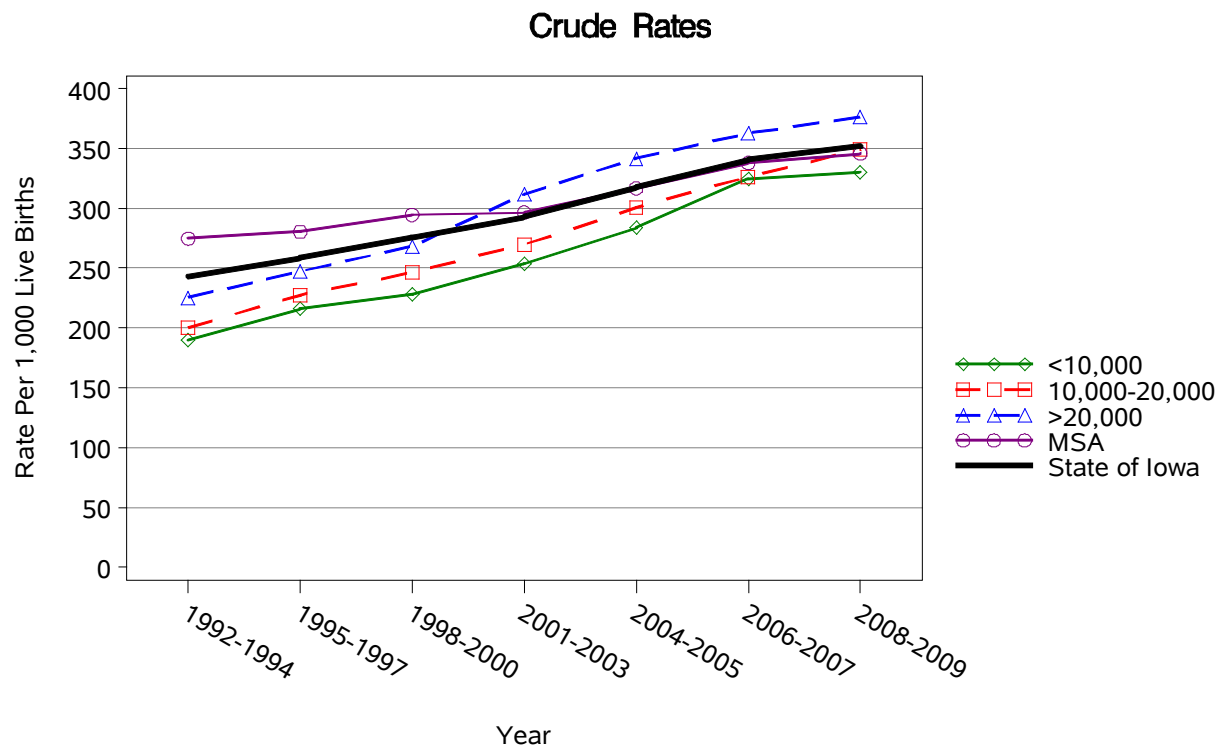
<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

## Live Births by County Group 1989-2009



## Out of Wedlock Births by County Group 1989-2009



# Mothers under Age 20 2008-2009

	Counties with Average Population < 10,000			Counties with Average Population 10,000 – 20,000			Counties with Average Population > 20,000			MSA Counties			
	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	
Counties with Average Population < 10,000	Adair	9	59.2 (83)	Lucas	19	94.5 (44)	Counties with Average Population 10,000 – 20,000	Boone	55	90.3 (50)	Lee	120	147.2 (04)
	Adams	11	119.6 (20)	Monona	13	73.0 (66)		Buchanan	38	62.6 (80)	Mahaska	44	75.7 (63)
	Audubon	15	102.0 (33)	Monroe	30	167.6 (01)		Carroll	40	74.3 (64)	Marion	56	68.2 (72)
	Clarke	34	120.6 (19)	Osceola	7	49.3 (93)		Cerro Gordo	83	83.1 (58)	Marshall	151	124.3 (15)
	Davis	18	63.2 (78)	Palo Alto	14	65.7 (75)		Clinton	145	121.3 (17)	Muscatine	156	125.8 (13)
	Decatur	20	90.1 (51)	Pocahontas	15	95.5 (43)		Des Moines	124	118.7 (21)	Plymouth	38	60.5 (82)
	Fremont	25	138.1 (07)	Ringgold	10	78.7 (61)		Fayette	53	107.9 (29)	Sioux	58	55.3 (89)
	Greene	19	92.7 (45)	Taylor	12	97.6 (39)		Henry	49	104.9 (31)	Wapello	140	143.0 (05)
	Howard	26	97.7 (37)	Van Buren	13	69.9 (70)		Jackson	35	85.4 (56)	Webster	129	137.2 (08)
	Humboldt	27	126.2 (12)	Wayne	16	99.4 (35)		Jasper	72	86.7 (54)	Winneshiek	20	51.5 (91)
	Ida	15	79.4 (60)	Worth	10	57.5 (86)					<b>Total</b>	1,606	101.4
				<b>Total</b>	378	92.7							
Counties with Average Population 10,000 – 20,000	Allamakee	38	101.9 (34)	Hardin	38	96.4 (42)	Counties with Average Population > 20,000	Benton	37	61.8 (81)	Linn	452	78.6 (62)
	Appanoose	44	133.3 (10)	Iowa	27	66.3 (74)		Black Hawk	308	87.5 (53)	Madison	23	55.0 (90)
	Buena Vista	81	140.6 (06)	Jefferson	30	97.7 (38)		Bremer	29	56.3 (87)	Mills	38	108.3 (28)
	Butler	19	55.9 (88)	Keokuk	15	63.0 (79)		Dallas	76	37.3 (98)	Polk	1,118	83.4 (57)
	Calhoun	16	71.7 (67)	Kossuth	23	74.2 (65)		Dubuque	210	86.0 (55)	Pottawattamie	280	110.0 (26)
	Cass	41	120.6 (18)	Louisa	39	158.5 (02)		Grundy	20	69.9 (69)	Scott	514	112.5 (23)
	Cedar	21	49.5 (92)	Lyon	14	42.9 (95)		Guthrie	16	65.3 (76)	Story	94	47.2 (94)
	Cherokee	21	90.5 (48)	Mitchell	9	37.3 (97)		Harrison	35	97.0 (41)	Warren	64	59.2 (84)
	Chickasaw	17	58.6 (85)	Montgomery	26	109.2 (27)		Johnson	135	39.4 (96)	Washington	49	91.1 (47)
	Clay	46	112.5 (24)	O'Brien	24	70.2 (68)		Jones	43	98.2 (36)	Woodbury	406	124.1 (16)
	Clayton	28	69.3 (71)	Page	46	124.3 (14)					<b>Total</b>	3,947	82.6
	Crawford	52	110.6 (25)	Poweshiek	31	82.7 (59)							
	Delaware	35	90.4 (49)	Sac	5	23.7 (99)							
	Dickinson	22	63.4 (77)	Shelby	23	97.0 (40)							
	Emmet	27	107.6 (30)	Tama	52	118.5 (22)							
	Floyd	33	88.5 (52)	Union	40	133.3 (10)							
	Franklin	24	92.0 (46)	Winnebago	25	104.6 (32)							
	Hamilton	48	136.0 (09)	Wright	51	153.2 (03)							
	Hancock	15	67.0 (73)	<b>Total</b>	1,146	94.2							
Counties with Average Population > 20,000							MSA Counties						
<b>State Total</b>		7,077	88.6										

<sup>1</sup>Rates per 1,000 live births

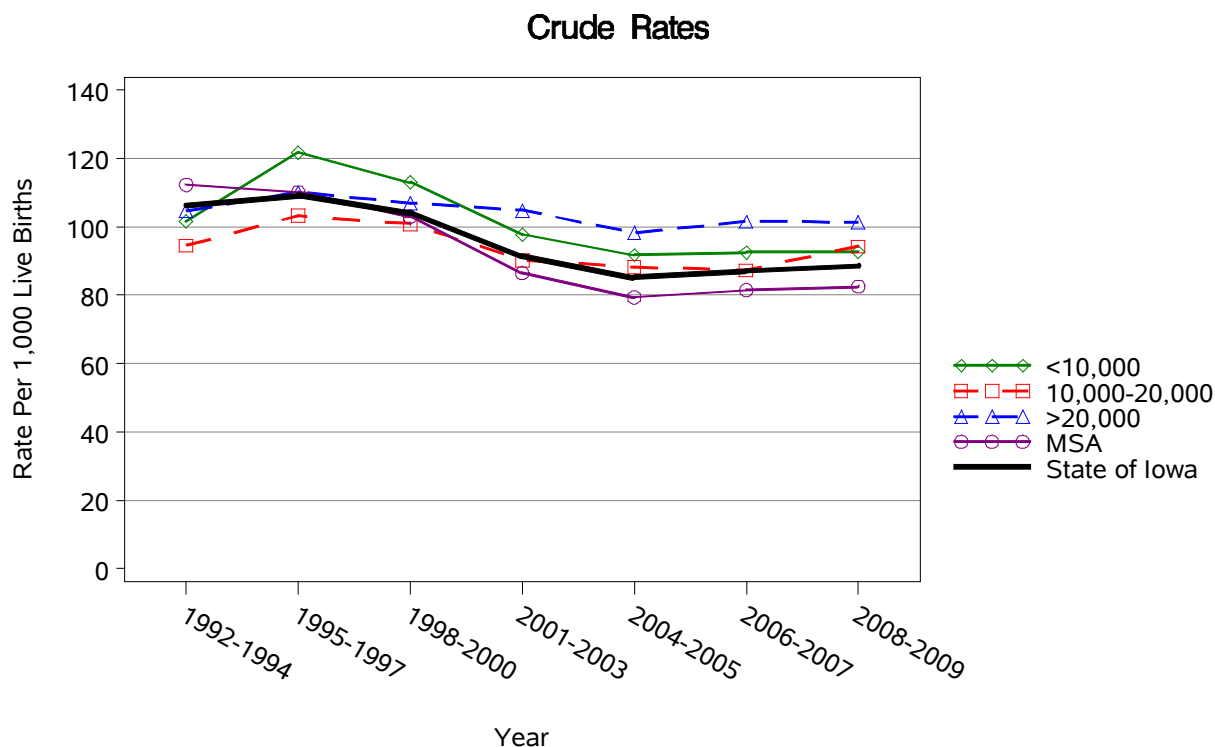
Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

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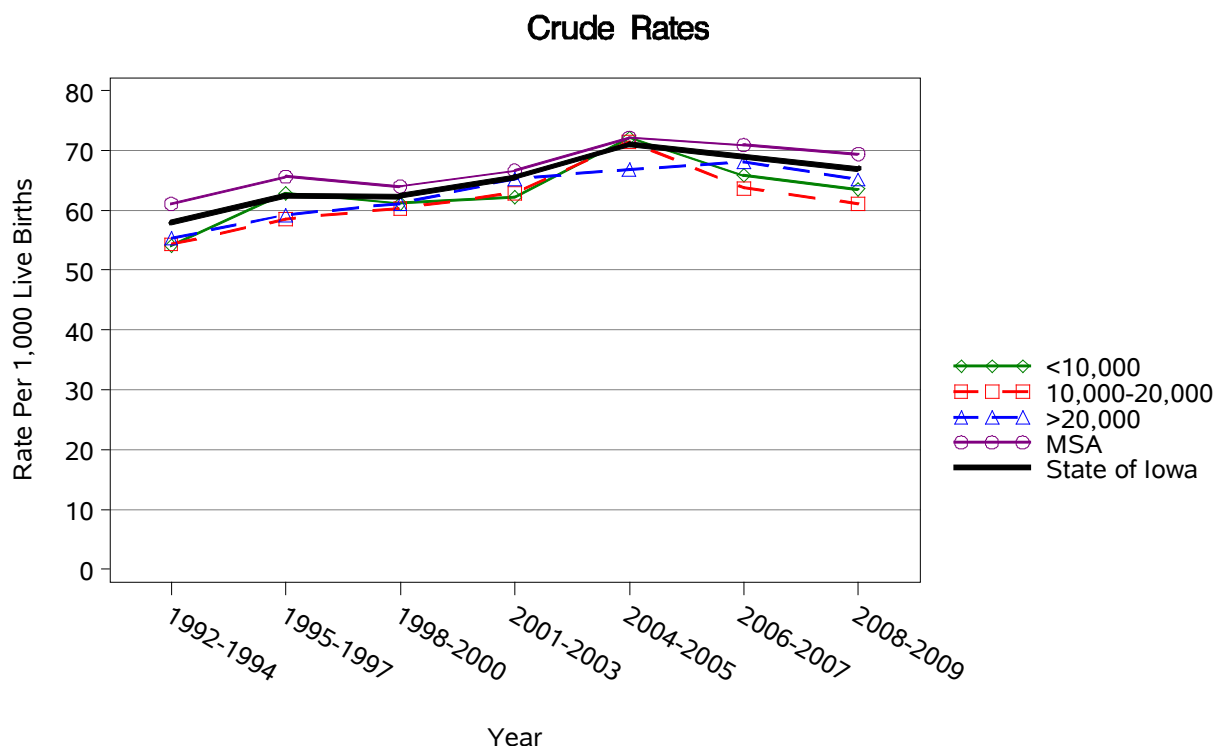
<sup>1</sup>Rates per 1,000 population  
<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates  
\* represents a count less than 5

## Mothers Under Age 20 by County Group 1989-2009



## Low Birth Weight (<2500 grams) by County Group 1989-2009



# Mothers Who Began Prenatal Care in First Trimester 2008-2009

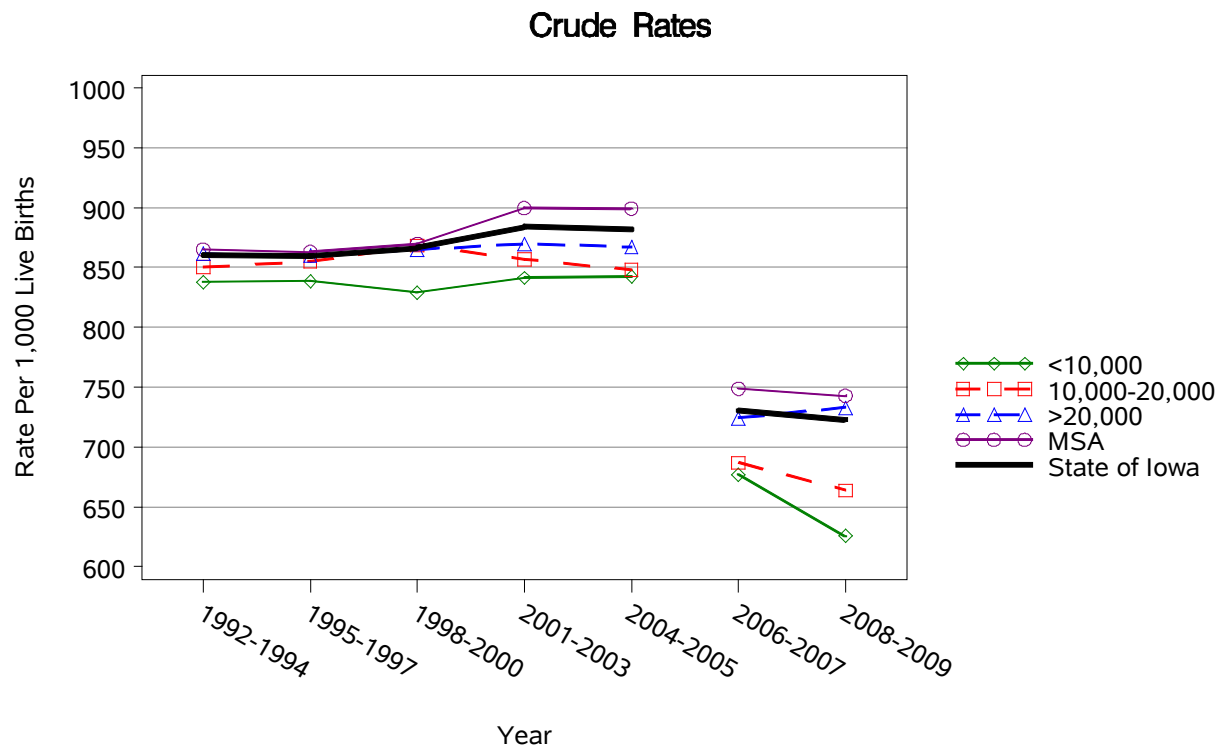
	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )
Counties with Average Population < 10,000	Adair	106	697.4 (57)	Lucas	125	621.9 (78)
	Adams	56	608.7 (79)	Monona	129	724.7 (44)
	Audubon	110	748.3 (33)	Monroe	141	787.7 (15)
	Clarke	152	539.0 (89)	Osceola	86	605.6 (80)
	Davis	157	550.9 (87)	Palo Alto	160	751.2 (31)
	Decatur	123	554.1 (86)	Pocahontas	102	649.7 (70)
	Fremont	122	674.0 (64)	Ringgold	69	543.3 (88)
	Greene	143	697.6 (56)	Taylor	60	487.8 (94)
	Howard	118	443.6 (98)	Van Buren	119	639.8 (73)
	Humboldt	148	691.6 (60)	Wayne	91	565.2 (84)
	Ida	147	777.8 (18)	Worth	86	494.3 (93)
				<b>Total</b>	2,550	625.6
Counties with Average Population 10,000 – 20,000	Allamakee	186	498.7 (92)	Hardin	252	639.6 (74)
	Appanoose	255	772.7 (21)	Iowa	327	803.4 (06)
	Buena Vista	336	583.3 (83)	Jefferson	228	742.7 (36)
	Butler	276	811.8 (02)	Keokuk	192	806.7 (04)
	Calhoun	157	704.0 (54)	Kossuth	199	641.9 (72)
	Cass	229	673.5 (65)	Louisa	178	723.6 (45)
	Cedar	340	801.9 (08)	Lyon	231	708.6 (53)
	Cherokee	178	767.2 (24)	Mitchell	108	448.1 (97)
	Chickasaw	175	603.4 (81)	Montgomery	170	714.3 (49)
	Clay	300	733.5 (39)	O'Brien	232	678.4 (63)
	Clayton	189	467.8 (95)	Page	246	664.9 (67)
	Crawford	236	502.1 (91)	Poweshiek	276	736.0 (38)
	Delaware	307	793.3 (12)	Sac	153	725.1 (43)
	Dickinson	264	760.8 (25)	Shelby	179	755.3 (28)
	Emmet	115	458.2 (96)	Tama	305	694.8 (58)
	Floyd	210	563.0 (85)	Union	189	630.0 (76)
	Franklin	139	532.6 (90)	Winnebago	99	414.2 (99)
	Hamilton	248	702.5 (55)	Wright	222	666.7 (66)
	Hancock	145	647.3 (71)	<b>Total</b>	8,071	663.7
Counties with Average Population > 20,000	Boone	459	753.7 (29)	Lee	612	750.9 (32)
	Buchanan	387	637.6 (75)	Mahaska	467	803.8 (05)
	Carroll	432	803.0 (07)	Marion	658	801.5 (09)
	Cerro Gordo	658	658.7 (69)	Marshall	828	681.5 (62)
	Clinton	918	768.2 (23)	Muscatine	956	771.0 (22)
	Des Moines	793	758.9 (26)	Plymouth	496	789.8 (13)
	Fayette	350	712.8 (50)	Sioux	749	714.7 (48)
	Henry	319	683.1 (61)	Wapello	758	774.3 (20)
	Jackson	292	712.2 (51)	Webster	590	627.7 (77)
	Jasper	662	797.6 (10)	Winneshiek	231	595.4 (82)
				<b>Total</b>	11,615	733
MSA Counties	Benton	464	774.6 (19)	Linn	4,300	748.2 (34)
	Black Hawk	2,746	780.1 (17)	Madison	309	739.2 (37)
	Bremer	418	811.7 (03)	Mills	262	746.4 (35)
	Dallas	1,593	780.9 (16)	Polk	9,799	730.6 (40)
	Dubuque	1,847	756.7 (27)	Pottawattamie	1,859	730.2 (41)
	Grundy	243	849.7 (01)	Scott	3,167	693.3 (59)
	Guthrie	162	661.2 (68)	Story	1,445	725.4 (42)
	Harrison	256	709.1 (52)	Warren	860	795.6 (11)
	Johnson	2707	789.2 (14)	Washington	387	719.3 (47)
	Jones	330	753.4 (30)	Woodbury	2,363	722.2 (46)
				<b>Total</b>	35,517	743
<b>State Total</b>		57,753	723			

<sup>1</sup>Rates per 1,000 live births

<sup>2</sup>Rank among 99 Iowa counties

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates

# **Mothers Who Began Prenatal Care in First Trimester by County Group 1989-2005, 2006-2009**



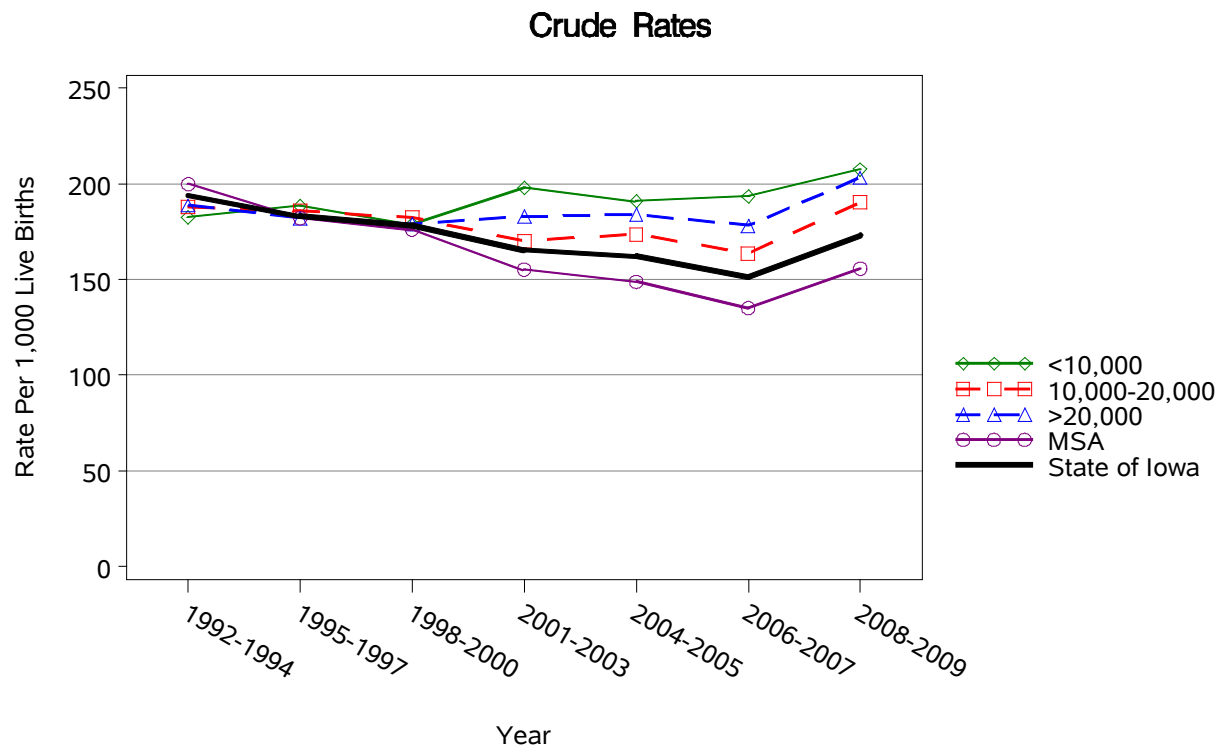
**Note: prenatal care statistics prior to 2005 and after 2006 cannot be directly compared due to changes in the format of the birth certificates from which these data are collected. This is indicated by a break in the above graph.**

# Mothers Who Smoked During Pregnancy 2008-2009

	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>2</sup> )
Counties with Average Population < 10,000	Adair	40	263.2 (10)	Lucas	49	243.8 (23)
	Adams	22	239.1 (26)	Monona	38	213.5 (37)
	Audubon	37	251.7 (17)	Monroe	49	273.7 (05)
	Clarke	52	184.4 (54)	Osceola	30	211.3 (40)
	Davis	46	161.4 (67)	Palo Alto	48	225.4 (30)
	Decatur	59	265.8 (08)	Pocahontas	35	222.9 (34)
	Fremont	45	248.6 (19)	Ringgold	25	196.9 (48)
	Greene	49	239.0 (27)	Taylor	15	122.0 (89)
	Howard	37	139.1 (84)	Van Buren	24	129.0 (86)
	Humboldt	41	191.6 (51)	Wayne	27	167.7 (64)
	Ida	56	296.3 (02)	Worth	22	126.4 (87)
				<b>Total</b>	846	207.6
Counties with Average Population 10,000 – 20,000	Allamakee	46	123.3 (88)	Hardin	97	246.2 (20)
	Appanoose	87	263.6 (09)	Iowa	62	152.3 (77)
	Buena Vista	52	90.3 (96)	Jefferson	59	192.2 (50)
	Butler	82	241.2 (24)	Keokuk	57	239.5 (25)
	Calhoun	57	255.6 (15)	Kossuth	56	180.6 (59)
	Cass	96	282.4 (04)	Louisa	38	154.5 (76)
	Cedar	66	155.7 (73)	Lyon	34	104.3 (95)
	Cherokee	61	262.9 (11)	Mitchell	28	116.2 (91)
	Chickasaw	51	175.9 (60)	Montgomery	64	268.9 (06)
	Clay	103	251.8 (16)	O'Brien	71	207.6 (42)
	Clayton	47	116.3 (90)	Page	96	259.5 (13)
	Crawford	66	140.4 (83)	Poweshiek	69	184.0 (55)
	Delaware	60	155.0 (74)	Sac	35	165.9 (65)
	Dickinson	55	158.5 (71)	Shelby	48	202.5 (44)
	Emmet	43	171.3 (63)	Tama	77	175.4 (61)
	Floyd	96	257.4 (14)	Union	86	286.7 (03)
	Franklin	42	160.9 (69)	Winnebago	37	154.8 (75)
	Hamilton	71	201.1 (46)	Wright	70	210.2 (41)
	Hancock	50	223.2 (33)	<b>Total</b>	2,315	190.4
Counties with Average Population > 20,000	Boone	130	213.5 (38)	Lee	217	266.3 (07)
	Buchanan	91	149.9 (79)	Mahaska	105	180.7 (58)
	Carroll	89	165.4 (66)	Marion	125	152.3 (78)
	Cerro Gordo	225	225.2 (31)	Marshall	196	161.3 (68)
	Clinton	312	261.1 (12)	Muscatine	232	187.1 (52)
	Des Moines	256	245.0 (21)	Plymouth	114	181.5 (56)
	Fayette	120	244.4 (22)	Sioux	76	72.5 (99)
	Henry	100	214.1 (36)	Wapello	201	205.3 (43)
	Jackson	103	251.2 (18)	Webster	282	300.0 (01)
	Jasper	195	234.9 (28)	Winneshiek	51	131.4 (85)
				<b>Total</b>	3,220	203.2
	MSA Counties	Benton	105	175.3 (62)	Linn	907
Black Hawk		709	201.4 (45)	Madison	61	145.9 (80)
Bremer		59	114.6 (92)	Mills	79	225.1 (32)
Dallas		169	82.8 (97)	Polk	1,911	142.5 (82)
Dubuque		392	160.6 (70)	Pottawattamie	576	226.2 (29)
Grundy		32	111.9 (93)	Scott	826	180.8 (57)
Guthrie		52	212.2 (39)	Story	220	110.4 (94)
Harrison		79	218.8 (35)	Warren	157	145.2 (81)
Johnson		269	78.4 (98)	Washington	104	193.3 (49)
Jones		81	184.9 (53)	Woodbury	655	200.2 (47)
				<b>Total</b>	7,443	155.7
State Total		13,824	173.1			



# Mothers Who Smoked During Pregnancy by County Group 1989-2009



# Fetal Deaths 2008-2009

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monona	*	*
	Audubon	*	*	Monroe	*	*
	Clarke	*	*	Osceola	*	*
	Davis	*	*	Palo Alto	*	*
	Decatur	*	*	Pocahontas	*	*
	Fremont	*	*	Ringgold	*	*
	Greene	*	*	Taylor	*	*
	Howard	*	*	Van Buren	*	*
	Humboldt	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				<b>Total</b>	25	6.1
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*
	Appanoose	*	*	Iowa	*	*
	Buena Vista	*	*	Jefferson	*	*
	Butler	*	*	Keokuk	*	*
	Calhoun	*	*	Kossuth	*	*
	Cass	*	*	Louisa	*	*
	Cedar	*	*	Lyon	*	*
	Cherokee	*	*	Mitchell	*	*
	Chickasaw	*	*	Montgomery	*	*
	Clay	*	*	O'Brien	*	*
	Clayton	*	*	Page	*	*
	Crawford	*	*	Poweshiek	*	*
	Delaware	*	*	Sac	*	*
	Dickinson	*	*	Shelby	*	*
	Emmet	*	*	Tama	*	*
	Floyd	*	*	Union	*	*
	Franklin	*	*	Winnebago	*	*
	Hamilton	*	*	Wright	*	*
	Hancock	*	*	<b>Total</b>	53	4.4
Counties with Average Population > 20,000	Boone	*	*	Lee	5	6.1
	Buchanan	*	*	Mahaska	*	*
	Carroll	*	*	Marion	7	8.5
	Cerro Gordo	*	*	Marshall	*	*
	Clinton	*	*	Muscatine	8	6.5
	Des Moines	8	7.7	Plymouth	*	*
	Fayette	*	*	Sioux	8	7.6
	Henry	6	12.8	Wapello	6	6.1
	Jackson	5	12.2	Webster	*	*
	Jasper	5	6	Winneshiek	*	*
				<b>Total</b>	85	5.4
MSA Counties	Benton	*	*	Linn	38	6.6
	Black Hawk	28	8	Madison	*	*
	Bremer	*	*	Mills	*	*
	Dallas	7	3.4	Polk	76	5.7
	Dubuque	11	4.5	Pottawattamie	*	*
	Grundy	*	*	Scott	33	7.2
	Guthrie	*	*	Story	7	3.5
	Harrison	*	*	Warren	5	4.6
	Johnson	23	6.7	Washington	6	11.2
	Jones	*	*	Woodbury	14	4.3
				<b>Total</b>	265	5.5
<b>State Total</b>		428	5.4			

<sup>1</sup>Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Birth Certificates  
\* represents a count less than 5

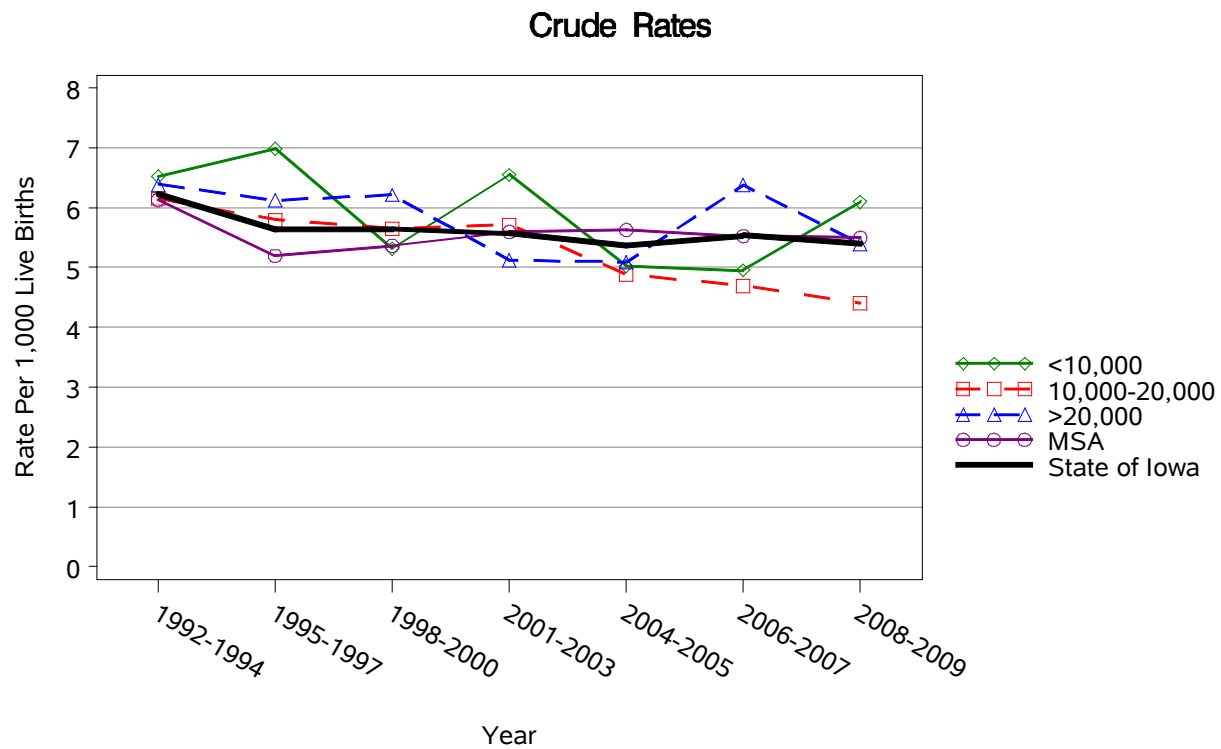
# Neonatal Deaths 2008-2009

	Nonmetropolitan Counties 2000-2009			Metropolitan Counties 2000-2009		
	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monona	*	*
	Audubon	*	*	Monroe	*	*
	Clarke	*	*	Osceola	*	*
	Davis	*	*	Palo Alto	*	*
	Decatur	*	*	Pocahontas	*	*
	Fremont	*	*	Ringgold	*	*
	Greene	*	*	Taylor	*	*
	Howard	*	*	Van Buren	*	*
	Humboldt	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				<b>Total</b>	15	3.7
	Counties with Average Population 10,000 – 20,000	Allamakee	*	*	Hardin	*
Appanoose		*	*	Iowa	*	*
Buena Vista		*	*	Jefferson	*	*
Butler		*	*	Keokuk	*	*
Calhoun		*	*	Kossuth	*	*
Cass		*	*	Louisa	*	*
Cedar		*	*	Lyon	*	*
Cherokee		*	*	Mitchell	*	*
Chickasaw		*	*	Montgomery	*	*
Clay		*	*	O'Brien	*	*
Clayton		*	*	Page	*	*
Crawford		*	*	Poweshiek	*	*
Delaware		*	*	Sac	*	*
Dickinson		*	*	Shelby	*	*
Emmet		*	*	Tama	*	*
Floyd		*	*	Union	*	*
Franklin		*	*	Winnebago	*	*
Hamilton		*	*	Wright	*	*
Hancock		*	*	<b>Total</b>	29	2.4
Counties with Average Population > 20,000	Boone	*	*	Lee	*	*
	Buchanan	*	*	Mahaska	*	*
	Carroll	*	*	Marion	*	*
	Cerro Gordo	6	6	Marshall	*	*
	Clinton	6	5	Muscatine	*	*
	Des Moines	5	4.8	Plymouth	*	*
	Fayette	*	*	Sioux	*	*
	Henry	*	*	Wapello	*	*
	Jackson	*	*	Webster	*	*
	Jasper	*	*	Winneshiek	*	*
				<b>Total</b>	49	3.1
	MSA Counties	Benton	*	*	Linn	18
Black Hawk		10	2.8	Madison	*	*
Bremer		*	*	Mills	*	*
Dallas		*	*	Polk	56	4.2
Dubuque		7	2.9	Pottawattamie	*	*
Grundy		*	*	Scott	12	2.6
Guthrie		*	*	Story	8	4
Harrison		*	*	Warren	7	6.5
Johnson		9	2.6	Washington	*	*
Jones		*	*	Woodbury	13	4
				<b>Total</b>	153	3.2
State Total		246	3.1			

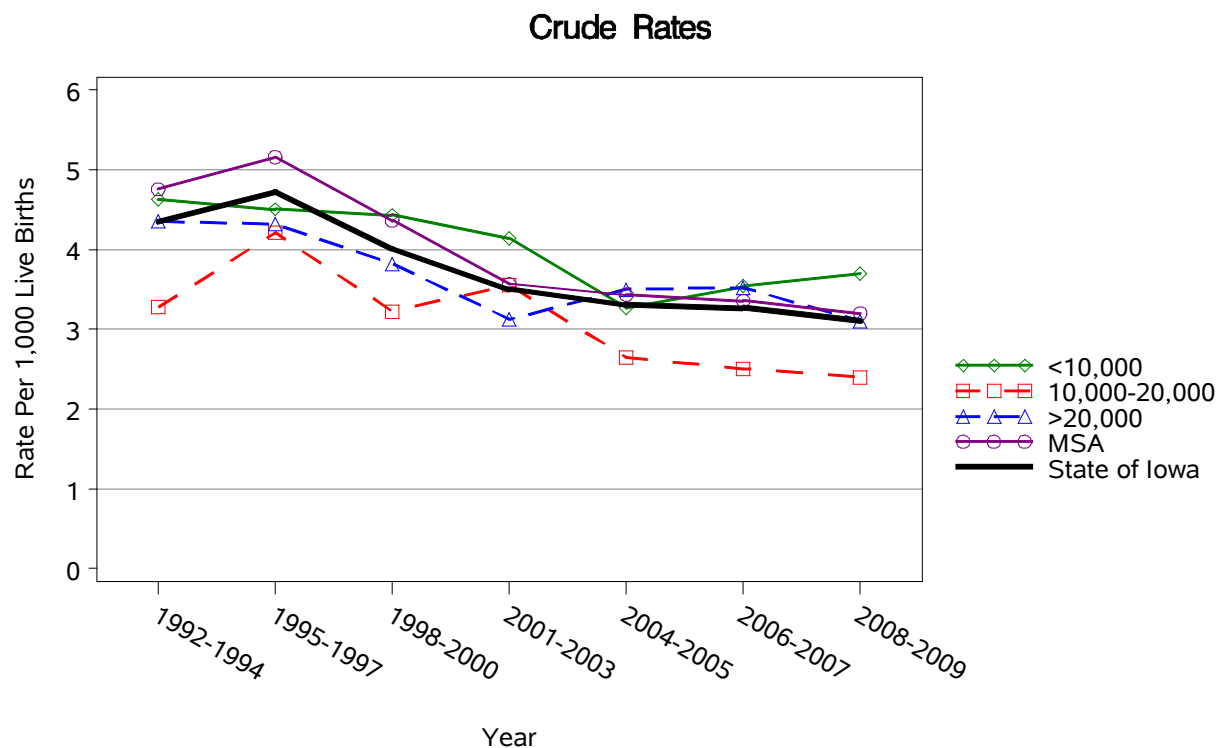
<sup>1</sup>Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates  
\* represents a count less than 5

## Fetal Deaths by County Group 1989-2009



## Neonatal Deaths by County Group 1989-2009



# Perinatal Deaths 2008-2009

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	5	24.9
	Adams	*	*	Monona	*	*
	Audubon	*	*	Monroe	*	*
	Clarke	*	*	Osceola	*	*
	Davis	*	*	Palo Alto	*	*
	Decatur	*	*	Pocahontas	*	*
	Fremont	*	*	Ringgold	*	*
	Greene	*	*	Taylor	*	*
	Howard	*	*	Van Buren	*	*
	Humboldt	*	*	Wayne	5	31.1
	Ida	*	*	Worth	*	*
				<b>Total</b>	40	9.8
	Counties with Average Population 10,000 – 20,000	Allamakee	*	*	Hardin	*
Appanoose		*	*	Iowa	*	*
Buena Vista		7	12.2	Jefferson	*	*
Butler		*	*	Keokuk	*	*
Calhoun		*	*	Kossuth	*	*
Cass		5	14.7	Louisa	*	*
Cedar		*	*	Lyon	*	*
Cherokee		*	*	Mitchell	*	*
Chickasaw		*	*	Montgomery	*	*
Clay		*	*	O'Brien	*	*
Clayton		*	*	Page	*	*
Crawford		*	*	Poweshiek	*	*
Delaware		*	*	Sac	*	*
Dickinson		*	*	Shelby	*	*
Emmet		*	*	Tama	*	*
Floyd		*	*	Union	5	16.7
Franklin		*	*	Winnebago	*	*
Hamilton		5	14.2	Wright	*	*
Hancock		*	*	<b>Total</b>	82	6.7
Counties with Average Population > 20,000	Boone	6	9.9	Lee	7	8.6
	Buchanan	5	8.2	Mahaska	5	8.6
	Carroll	*	*	Marion	8	9.7
	Cerro Gordo	9	9	Marshall	5	4.1
	Clinton	9	7.5	Muscatine	11	8.9
	Des Moines	13	12.4	Plymouth	*	*
	Fayette	*	*	Sioux	12	11.5
	Henry	7	15	Wapello	8	8.2
	Jackson	5	12.2	Webster	5	5.3
	Jasper	6	7.2	Winneshiek	*	*
				<b>Total</b>	134	8.5
	MSA Counties	Benton	*	*	Linn	56
Black Hawk		38	10.8	Madison	*	*
Bremer		5	9.7	Mills	*	*
Dallas		8	3.9	Polk	132	9.8
Dubuque		18	7.4	Pottawattamie	7	2.7
Grundy		*	*	Scott	45	9.9
Guthrie		*	*	Story	15	7.5
Harrison		*	*	Warren	12	11.1
Johnson		32	9.3	Washington	6	11.2
Jones		*	*	Woodbury	27	8.3
				<b>Total</b>	418	8.7
State Total		674	8.4			

<sup>1</sup>Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates  
\* represents a count less than 5

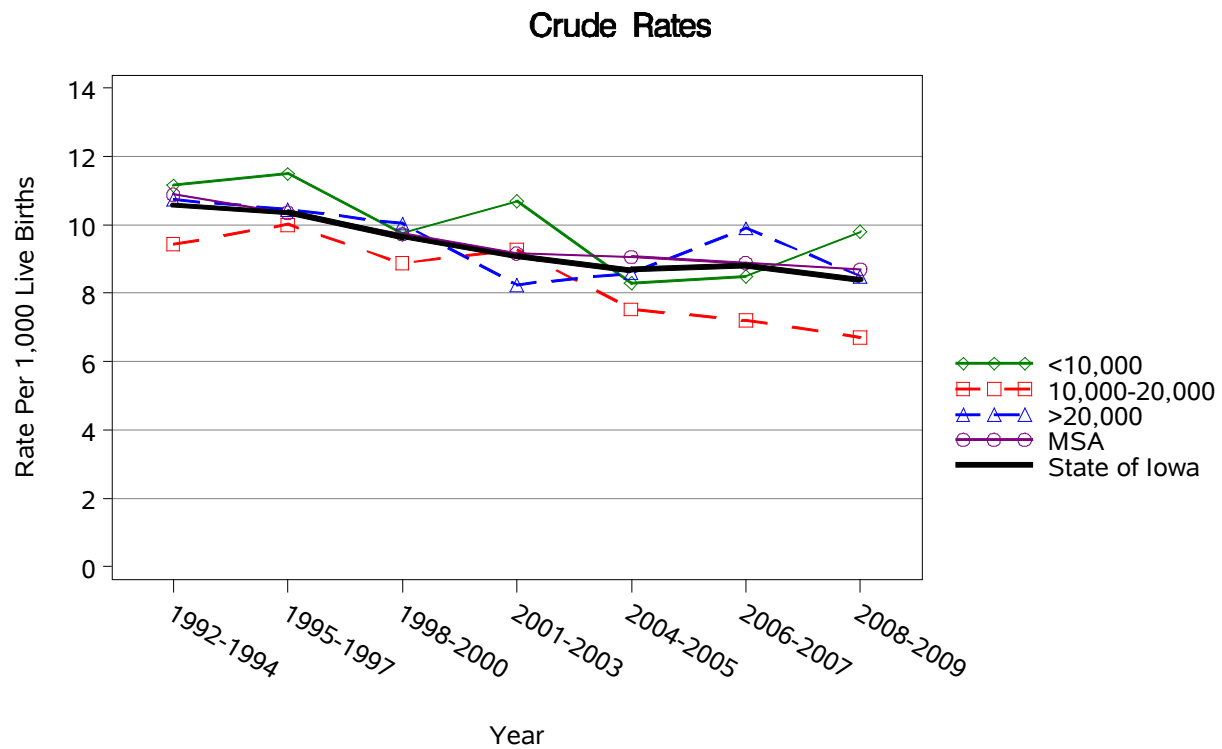
# Infant Deaths 2008-2009

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monona	*	*
	Audubon	*	*	Monroe	*	*
	Clarke	*	*	Osceola	*	*
	Davis	*	*	Palo Alto	*	*
	Decatur	*	*	Pocahontas	*	*
	Fremont	*	*	Ringgold	*	*
	Greene	*	*	Taylor	*	*
	Howard	*	*	Van Buren	*	*
	Humboldt	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				<b>Total</b>	25	6.1
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	Hardin	*	*
	Appanoose	*	*	Iowa	*	*
	Buena Vista	5	8.7	Jefferson	*	*
	Butler	*	*	Keokuk	*	*
	Calhoun	*	*	Kossuth	*	*
	Cass	*	*	Louisa	*	*
	Cedar	*	*	Lyon	*	*
	Cherokee	*	*	Mitchell	*	*
	Chickasaw	*	*	Montgomery	*	*
	Clay	*	*	O'Brien	*	*
	Clayton	*	*	Page	*	*
	Crawford	*	*	Poweshiek	*	*
	Delaware	*	*	Sac	*	*
	Dickinson	*	*	Shelby	*	*
	Emmet	*	*	Tama	*	*
	Floyd	*	*	Union	*	*
	Franklin	*	*	Winnebago	*	*
	Hamilton	6	17	Wright	*	*
	Hancock	*	*	<b>Total</b>	49	4
Counties with Average Population > 20,000	Boone	*	*	Lee	*	*
	Buchanan	*	*	Mahaska	*	*
	Carroll	*	*	Marion	5	6.1
	Cerro Gordo	7	7	Marshall	*	*
	Clinton	9	7.5	Muscatine	*	*
	Des Moines	5	4.8	Plymouth	*	*
	Fayette	*	*	Sioux	7	6.7
	Henry	*	*	Wapello	*	*
	Jackson	*	*	Webster	*	*
	Jasper	*	*	Winneshiek	*	*
				<b>Total</b>	74	4.7
MSA Counties	Benton	*	*	Linn	34	5.9
	Black Hawk	19	5.4	Madison	*	*
	Bremer	*	*	Mills	*	*
	Dallas	*	*	Polk	84	6.3
	Dubuque	11	4.5	Pottawattamie	12	4.7
	Grundy	*	*	Scott	24	5.3
	Guthrie	*	*	Story	13	6.5
	Harrison	*	*	Warren	9	8.3
	Johnson	17	5	Washington	*	*
	Jones	*	*	Woodbury	20	6.1
				<b>Total</b>	258	5.4
<b>State Total</b>		406	5.1			

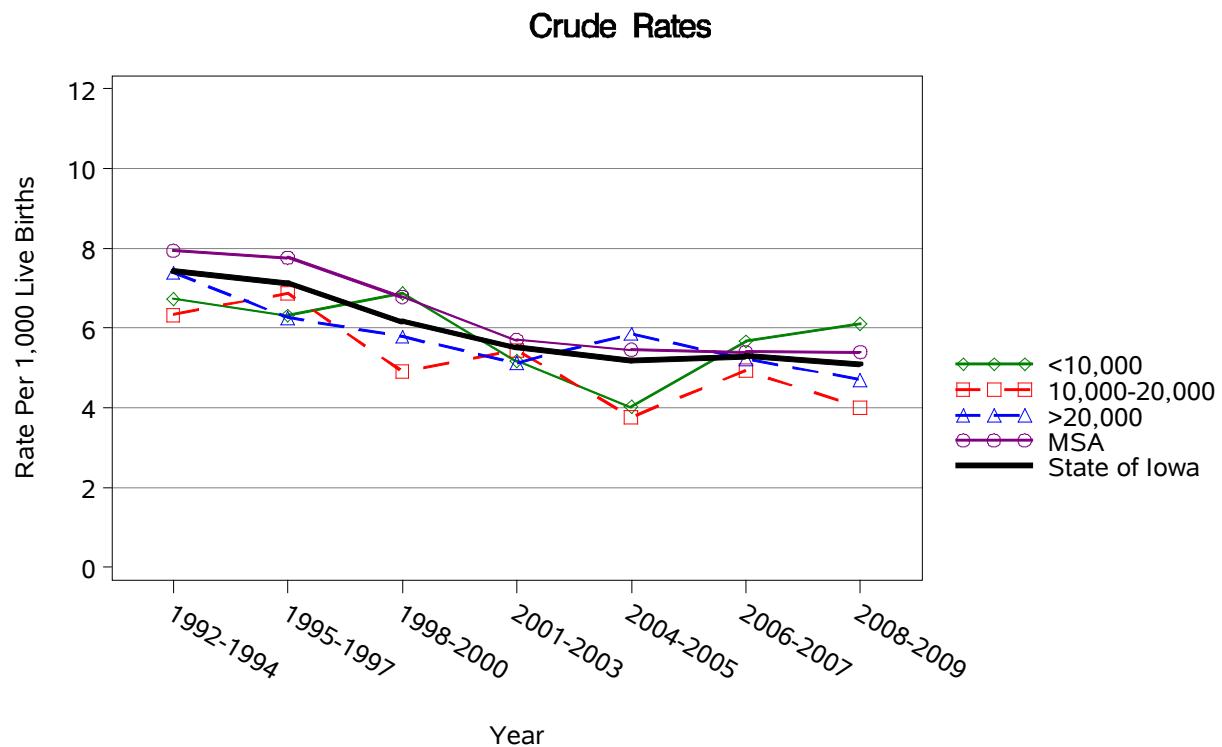
<sup>1</sup>Rates per 1,000 live births

Source: Iowa Department of Public Health, Vital Statistics, Death Certificates  
\* represents a count less than 5

## Perinatal Deaths by County Group 1989-2009



## Infant Deaths by County Group 1989-2009



# Birth Defects 2004-2008

	County			County		
	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	8	19.46	Lucas	20	35.03
	Adams	*	*	Monona	9	17.54
	Audubon	5	15.97	Monroe	9	20.09
	Clarke	12	17.96	Osceola	5	13.70
	Davis	14	20.83	Palo Alto	9	15.23
	Decatur	13	24.34	Pocahontas	7	17.86
	Fremont	9	20.50	Ringgold	7	22.01
	Greene	11	20.91	Taylor	6	16.44
	Howard	7	10.79	Van Buren	11	23.31
	Humboldt	10	16.72	Wayne	8	19.18
	Ida	5	11.55	Worth	5	12.35
				<b>Total</b>	190-194 <sup>2</sup>	18.4-18.8 <sup>2</sup>
Counties with Average Population 10,000 – 20,000	Allamakee	18	17.72	Hardin	26	25.39
	Appanoose	8	9.58	Iowa	25	25.83
	Buena Vista	34	24.30	Jefferson	25	32.18
	Butler	30	33.52	Keokuk	13	20.28
	Calhoun	15	28.52	Kossuth	19	22.02
	Cass	14	16.89	Louisa	18	24.69
	Cedar	29	28.38	Lyon	*	*
	Cherokee	6	10.20	Mitchell	8	13.03
	Chickasaw	15	19.43	Montgomery	14	21.12
	Clay	22	21.05	O'Brien	7	8.01
	Clayton	17	16.49	Page	12	13.97
	Crawford	25	20.70	Poweshiek	21	21.83
	Delaware	27	26.32	Sac	6	10.34
	Dickinson	*	*	Shelby	8	13.68
	Emmet	*	*	Tama	29	24.91
	Floyd	24	22.84	Union	19	23.99
	Franklin	19	27.74	Winnebago	14	23.37
	Hamilton	16	17.19	Wright	16	18.24
	Hancock	13	19.85	<b>Total</b>	612-624 <sup>2</sup>	19.5-19.8 <sup>2</sup>
Counties with Average Population > 20,000	Boone	25	16.14	Lee	64	31.36
	Buchanan	49	31.76	Mahaska	40	27.19
	Carroll	32	23.36	Marion	58	27.67
	Cerro Gordo	84	33.03	Marshall	78	25.08
	Clinton	97	31.15	Muscatine	87	28.26
	Des Moines	68	25.50	Plymouth	31	19.41
	Fayette	27	23.50	Sioux	21	8.43
	Henry	32	26.17	Wapello	69	28.00
	Jackson	27	26.21	Webster	47	19.29
	Jasper	55	25.45	Winneshiek	23	22.75
				<b>Total</b>	1014	25.26
MSA Counties	Benton	37	24.44	Linn	342	24.25
	Black Hawk	296	34.11	Madison	20	20.00
	Bremer	37	27.37	Mills	19	20.45
	Dallas	96	22.16	Polk	781	23.36
	Dubuque	170	28.31	Pottawattamie	86	13.98
	Grundy	30	46.73	Scott	334	29.21
	Guthrie	15	25.08	Story	89	18.20
	Harrison	22	24.80	Warren	65	24.60
	Johnson	176	22.00	Washington	35	24.58
	Jones	22	19.32	Woodbury	161	19.63
				<b>Total</b>	2833	24.14
<b>State Total</b>		4649-4665 <sup>2</sup>	23.33-23.41 <sup>2</sup>			

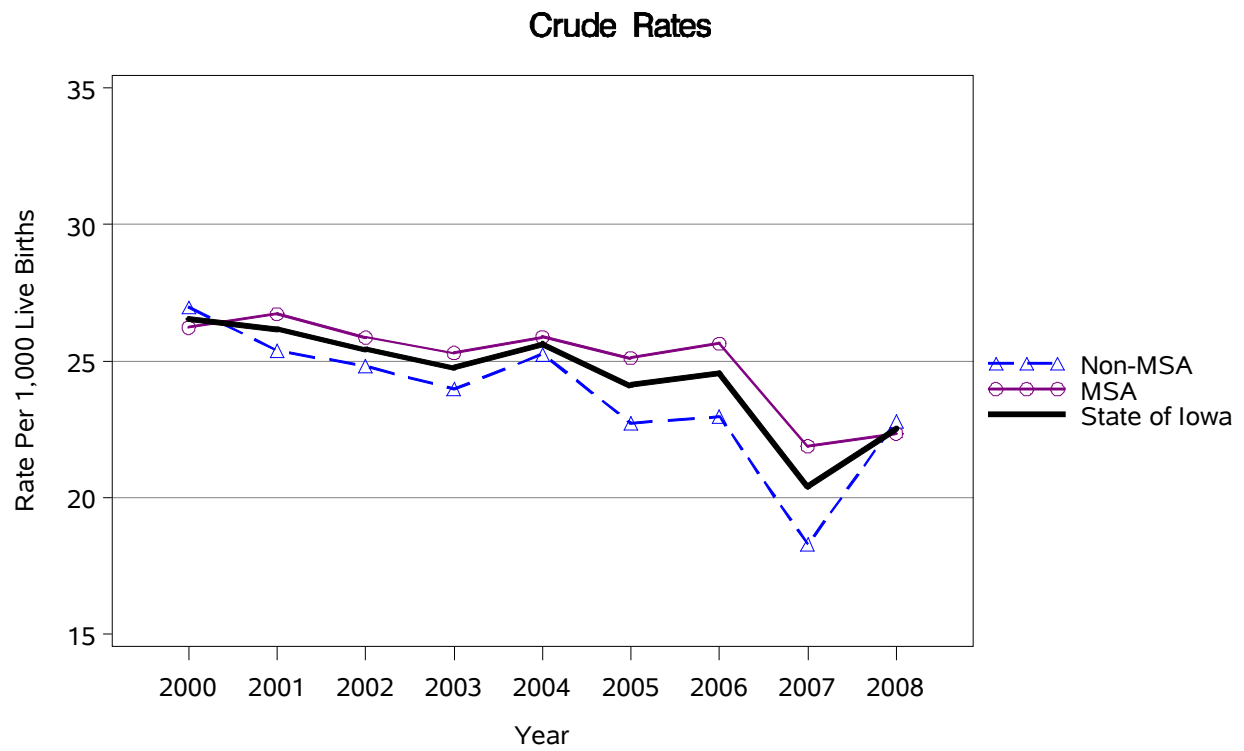
<sup>1</sup>Rates per 1,000 live births

<sup>2</sup>Range given to mask small counts

Source: Iowa Registry for Congenital and Inherited Disorders, University of Iowa



# Birth Defects by County Group 2000-2008



## Selected Birth Defects in Iowa 2004-2008

Defect Name	Defects	Crude Rate <sup>1</sup>
Anencephalus	62	3.11
Spina bifida without anencephalus	92	4.62
Hydrocephalus without spina bifida	218	10.94
Encephalocele	19	0.95
Microcephalus	220	11.04
Anophthalmia/microphthalmia	54	2.71
Congenital Cataract	53	2.66
Anotia/microtia	35	1.76
Common truncus	18	0.90
Transposition of great arteries	65	3.26
Tetralogy of Fallot	82	4.12
Ventricular septal defect	1058	53.09
Atrial septal defect	630	31.61
Endocardial cushion defect	151	7.58
Pulmonary valve atresia and stenosis	212	10.64
Tricuspid valve atresia and stenosis	45	2.26
Ebsteins's anomaly	19	0.95
Aortic valve stenosis	67	3.36
Hypoplastic left heart syndrome	44	2.21
Patent ductus arteriosus	545	27.35
Coarctation of aorta	101	5.07
Cleft palate without cleft lip	146	7.33
Cleft lip with and without cleft palate	228	11.44
Choanal atresia	34	1.71
Esophageal atresia/tracheoesophageal fistula	39	1.96
Rectal and large intestinal atresia/stenosis	102	5.12
Pyloric stenosis	527	26.44
Hirschsprung's disease (congenital megacolon)	36	1.81
Biliary atresia	8	0.40
Renal agenesis/hypoplasia	148	7.43
Bladder exstrophy	8	0.40
Obstructive genitourinary defect	535	26.85
Hypospadias 2nd and 3rd degree	212	10.64
Reduction deformity, upper limbs	96	4.82
Reduction deformity, lower limbs	42	2.11
Gastroschisis	85	4.27
Omphalocele	55	2.76
Congenital hip dislocation	131	6.57
Diaphragmatic hernia	16	0.80
Trisomy 13	36	1.81
Down syndrome	320	16.06
Trisomy 18	58	2.91
Amniotic bands	29	1.46

<sup>1</sup>Rates per 10,000 live births

Source: Iowa Registry for Congenital and Inherited Disorders, The University of Iowa

## Infectious Diseases

Fifty-one specific infectious diseases are listed as reportable conditions in the Iowa Administrative Code 641, Chapter 1, although many other diseases are reportable as rare or unusual diseases. Disease surveillance, consulting, and outbreak management are provided by the Center for Acute Disease Epidemiology. The Bureau of Prevention and Immunization provided education programs and vaccine distribution services. Local public health nurses or disease prevention specialists,

### HIGHLIGHTS...

- ✓ IDPH received 38 disease reports of cases of Mumps in 2010.
- ✓ IDPH received 48 reports of cases of Hepatitis A in 2009-10.
- ✓ IDPH followed-up on 410 cases of Salmonella in 2009 and 530 in 2010.

in conjunction with the staff epidemiologists at the Iowa Department of Public Health, interview persons with selected conditions or diseases and conduct investigations of disease outbreaks. Disease prevention steps include promoting vaccinations, partner counseling/referral services for sexually transmitted diseases, and disease education initiatives.

Crucial partners contributing to the surveillance and reduction of disease include the State Hygienic Laboratory at the University of

Iowa, local public-health agencies (city and county) and health professionals. Approximately 600 health workers use the Iowa Disease Surveillance System to provide critical information.

More than 60,000 laboratory results of infectious diseases and conditions are submitted to the IDPH surveillance programs each year. From them, we learned:

- In 2010, the number of vaccine-preventable diseases decreased when compared to the three-year average (2007-2009); however, the number of pertussis and mumps cases increased.
- In 2006, Iowa was at the center of the largest U.S. mumps outbreak in 20 years, with 1,963 confirmed cases. The average over 2007-2009 was 22 per year – slightly less than 2010.
- Enteric diseases, like salmonellosis and campylobacteriosis, were generally higher in 2010 than in previous years.
- Diagnoses of chlamydial continue to rise, while the numbers of gonorrhea and syphilis diagnoses remain relatively stable.

Infectious diseases continue to be a concern, and IDPH is working daily to control local outbreaks.

# Sexually Transmitted Diseases<sup>1</sup> 2009-2010

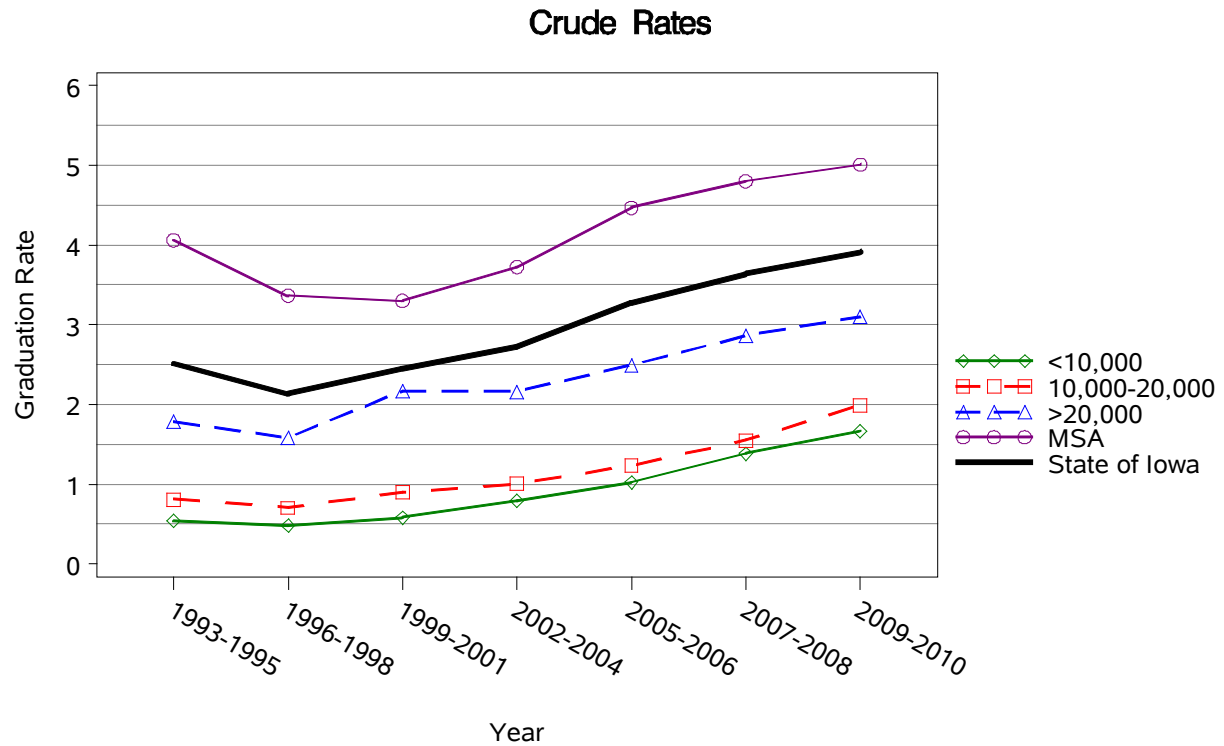
	County			County		
	County	#	Crude Rate <sup>2</sup>	County	#	Crude Rate <sup>2</sup>
Counties with Average Population < 10,000	Adair	16	1.09	Lucas	28	1.53
	Adams	11	1.40	Monona	38	2.14
	Audubon	31	2.57	Monroe	25	1.66
	Clarke	34	1.87	Osceola	6	0.47
	Davis	18	1.05	Palo Alto	33	1.78
	Decatur	39	2.37	Pocahontas	31	2.11
	Fremont	18	1.23	Ringgold	7	0.71
	Greene	39	2.11	Taylor	21	1.66
	Howard	31	1.65	Van Buren	20	1.30
	Humboldt	47	2.48	Wayne	16	1.27
	Ida	24	1.77	Worth	23	1.52
				<b>Total</b>	556	1.67
Counties with Average Population 10,000 – 20,000	Allamakee	68	2.36	Hardin	92	2.68
	Appanoose	34	1.34	Iowa	73	2.31
	Buena Vista	126	3.21	Jefferson	35	1.13
	Butler	56	1.95	Keokuk	33	1.56
	Calhoun	39	2.02	Kossuth	32	1.06
	Cass	44	1.60	Louisa	53	2.36
	Cedar	66	1.83	Lyon	9	0.40
	Cherokee	23	1.01	Mitchell	12	0.56
	Chickasaw	40	1.66	Montgomery	29	1.34
	Clay	103	3.10	O'Brien	23	0.83
	Clayton	41	1.17	Page	40	1.31
	Crawford	140	4.26	Poweshiek	117	3.18
	Delaware	41	1.19	Sac	19	0.94
	Dickinson	58	1.74	Shelby	34	1.42
	Emmet	62	3.03	Tama	119	3.42
	Floyd	91	2.86	Union	54	2.21
	Franklin	57	2.70	Winnebago	45	2.12
	Hamilton	59	1.94	Wright	53	2.08
	Hancock	27	1.22	<b>Total</b>	2,047	1.99
Counties with Average Population > 20,000	Boone	104	1.99	Lee	243	3.43
	Buchanan	101	2.42	Mahaska	148	3.36
	Carroll	61	1.48	Marion	115	1.76
	Cerro Gordo	268	3.07	Marshall	277	3.53
	Clinton	358	3.66	Muscatine	313	3.65
	Des Moines	541	6.59	Plymouth	99	2.04
	Fayette	83	2.06	Sioux	54	0.84
	Henry	132	3.31	Wapello	250	3.54
	Jackson	86	2.18	Webster	413	5.39
	Jasper	128	1.77	Winneshiek	69	1.67
				<b>Total</b>	3,843	3.10
MSA Counties	Benton	101	1.89	Linn	2,151	5.14
	Black Hawk	2,335	9.03	Madison	52	1.69
	Bremer	94	2.00	Mills	44	1.47
	Dallas	192	1.55	Polk	4,523	5.27
	Dubuque	776	4.17	Pottawattamie	697	3.86
	Grundy	37	1.52	Scott	2,593	7.78
	Guthrie	27	1.25	Story	622	3.57
	Harrison	47	1.53	Warren	154	1.70
	Johnson	1,428	5.45	Washington	110	2.59
	Jones	81	1.99	Woodbury	1,033	5.02
				<b>Total</b>	17,097	5.01
<b>State Total</b>		23,543	3.91			

<sup>1</sup>Includes syphilis, gonorrhea, and Chlamydia, but not latent cases (infection > 1 year)

<sup>2</sup>Rates per 1,000 2009 population

Source: Disease Prevention Program, Iowa Department of Public Health

# Sexually Transmitted Diseases by County Group 1993-2010



## Selected Infectious Diseases State of Iowa 2002 – 2010

	Number of Cases Reported								
	2002	2003	2004	2005	2006	2007	2008	2009	2010
AIDS	75	76	69	78	84	65	65	88	71
Campylobacteriosis	422	461	558	539	449	527	583	559	749
Chlamydia	6236	6462	6958	7390	8393	8643	9247	9406	10542
Cryptosporidiosis	48	124	89	122	231	612	284	232	396
E. coli	120	105	124	108	172	185	222	179	175
Giardiasis	312	279	301	283	302	302	322	299	284
Gonorrhea	1495	1544	1249	1606	1967	1928	1600	1658	1803
Hepatitis A	60	41	50	22	13	48	109	37	11
Measles			4					1	
Mumps	1	2	2	6	1964	26	24	15	38
Pertussis	230	182	1066	1106	345	152	255	239	697
Rubella									
Salmonella	504	408	433	413	475	478	425	410	530
Shigellosis	113	74	69	99	141	109	210	58	57
Syphilis (primary or secondary)	10	12	5	15	19	21	15	23	19
Tuberculosis	31	40	47	55	36	43	49	42	47

*Source: Bureau of Infectious Diseases, Iowa Department of Public Health*

## Cancer Incidence and Mortality

From 2004 through 2008, cancer was the second leading cause of death in Iowa with 31,824 Iowans dying from cancer (23% of all deaths). During this period, 80,505 Iowans were newly diagnosed with an invasive cancer. Although cancer occurs in people of all ages, 80 percent of these new cancers were diagnosed in those 55 years of age and older.

For all cancer mortality, the age-adjusted rates increased slightly over time, as the average population increased between the three time periods spanning 1976 -1995. In the 1996-2008 periods, these rates began to slightly decrease. Between 2004 and 2008, the age-adjusted rates were highest in the more densely populated counties. However, the crude rates were highest in counties with average populations < 10,000.

### FOUR PRIMARY TYPES OF CANCER IN IOWA ...

Lung	Female Breast
Prostate	Colorectum

This reflects a larger proportion of older people in the smaller, more rural counties. Since the 1990s, the U.S. and Iowa have experienced a decline in age-adjusted cancer mortality rates, led by reductions in prostate, female

breast, and colorectal cancer mortality rates. Today, less than half of Iowans newly diagnosed with a cancer will die from it. Survival rates, however, vary considerably by cancer site.

For all cancer incidence, the age-adjusted rates by time periods increased from 1979 through 1995, but have leveled off since. These rates vary by cancer site and show the steepest increases for non-Hodgkin lymphoma and skin melanoma. Between 2004 and 2008, the age-adjusted rates generally showed larger rates as the population density

increased, but the crude rates declined – again reflecting the larger proportion of older residents in smaller, rural counties.

Tobacco use is the leading modifiable risk factor for cancer, and is associated with cancers of the lung, oral cavity (excluding lip) and pharynx, esophagus, larynx, pancreas, stomach, uterine cervix, urinary bladder, kidney and renal pelvis, and acute myelogenous leukemia. Alcohol consumption is also a known risk factor, particularly for cancers of the upper aerodigestive tract including oral cavity (excluding lip) and pharynx, esophagus, and larynx. Ongoing research indicates that dietary factors may play an important role in the cancers of the prostate and colorectum. Other important risk factors include obesity for cancers of the uterine corpus and kidney, excessive sunlight exposure for skin melanoma, and genetic predisposition (or positive family history) for colorectal, prostate, and breast cancers. Screening and early detection are another way Iowans can survive cancer, particularly for colorectal, female breast and cervical cancers.

The State Health Registry of Iowa has been recording the occurrence of cancer in Iowa since 1973. It receives mortality data from the Iowa Department of Public Health (IDPH).

### MOST COMMON CANCERS IN IOWA

#### **Females**

Breast  
Lung  
Colorectum

#### **Males**

Prostate  
Lung  
Colorectum

#### **Children (0-19)**

Leukemia  
Brain and other central nervous system  
Lymphoma

## All Cancer Incidence 2004-2008

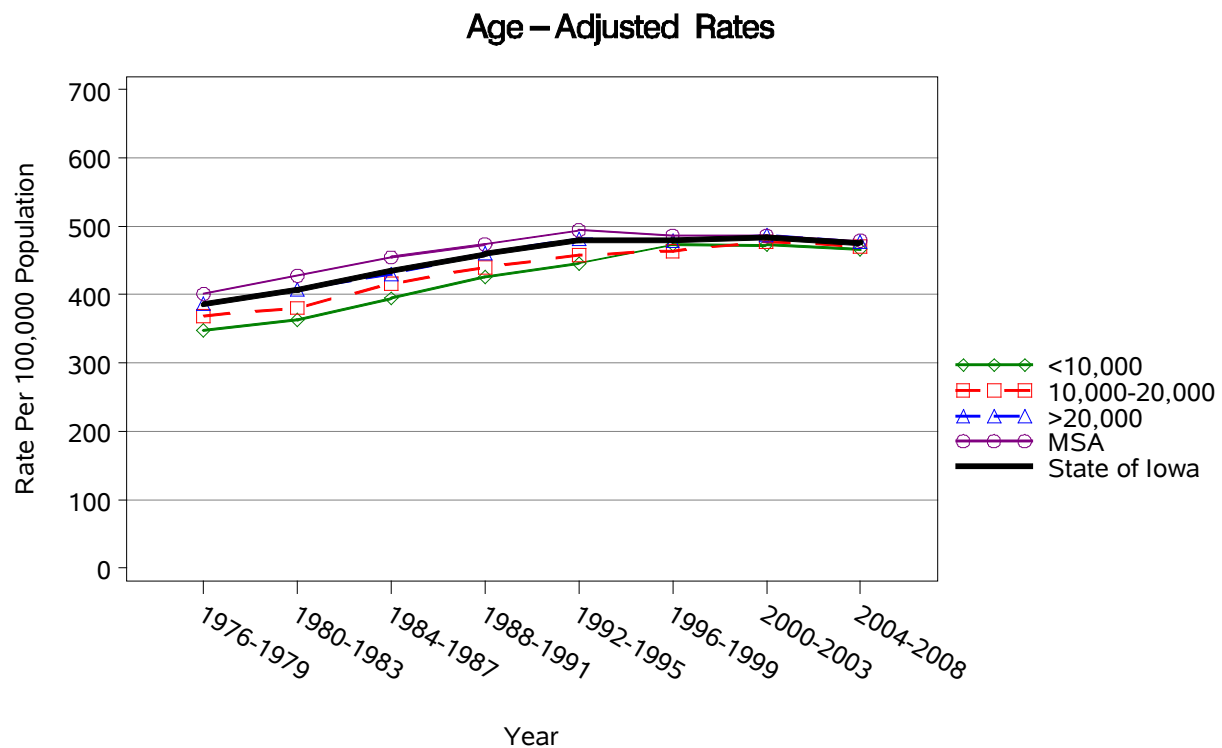
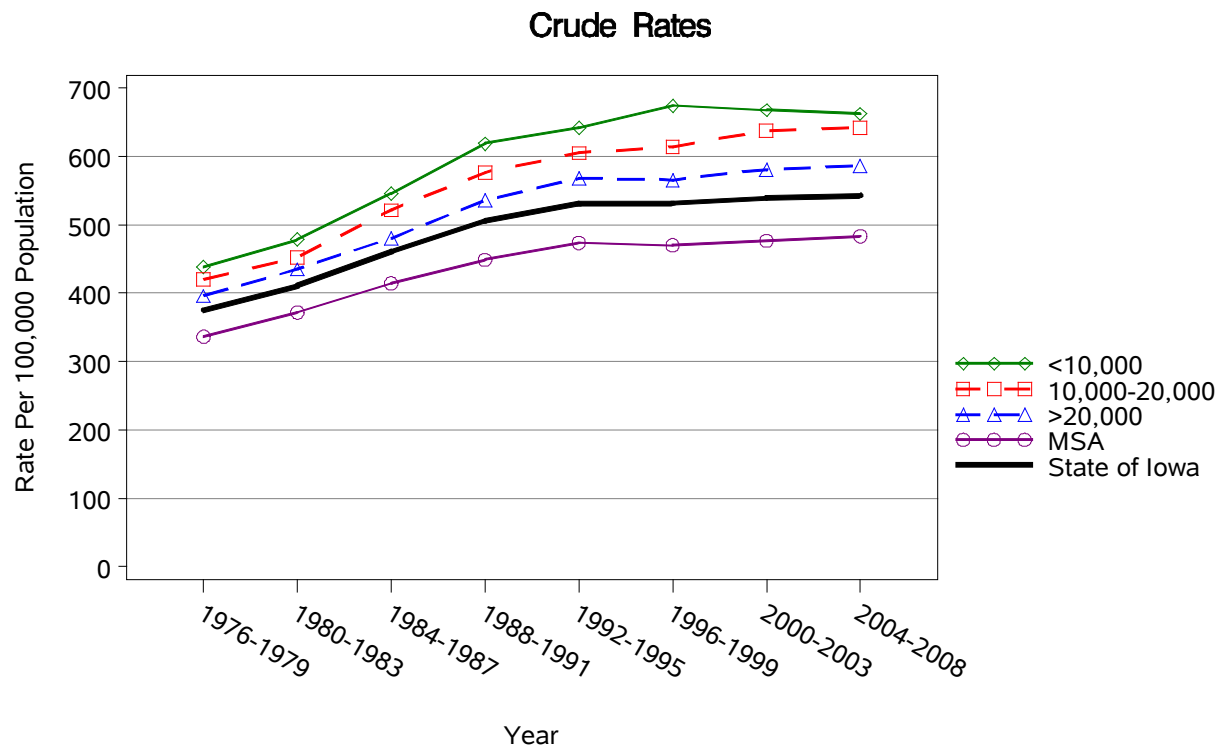
	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	266	695.0 (17)	482.2 (41)	Lucas	267	562.2 (71)	418.1 (95)
	Adams	145	700.9 (16)	449.1 (79)	Monona	351	759.4 (02)	481.0 (42)
	Audubon	224	721.5 (10)	496.8 (15)	Monroe	271	707.6 (14)	516.4 (06)
	Clarke	264	580.6 (66)	463.7 (64)	Osceola	224	681.9 (22)	518.7 (05)
	Davis	223	521.8 (86)	426.7 (93)	Palo Alto	345	728.0 (09)	506.6 (11)
	Decatur	260	621.6 (47)	489.2 (26)	Pocahontas	291	756.0 (04)	483.2 (38)
	Fremont	256	679.1 (23)	476.0 (50)	Ringgold	162	632.5 (43)	388.0 (99)
	Greene	330	685.8 (20)	460.3 (67)	Taylor	212	652.3 (31)	430.9 (91)
	Howard	280	586.9 (62)	432.7 (90)	Van Buren	239	624.1 (46)	455.5 (72)
	Humboldt	309	634.6 (42)	437.0 (88)	Wayne	248	778.3 (01)	496.3 (17)
	Ida	263	743.2 (07)	495.5 (18)	Worth	233	608.8 (55)	458.0 (69)
					<b>Total</b>	5,663	662.4	466.1
Counties with Average Population 10,000 – 20,000	Allamakee	458	635.5 (41)	476.6 (48)	Hardin	573	649.0 (34)	455.6 (71)
	Appanoose	467	712.6 (12)	506.4 (12)	Iowa	556	702.1 (15)	564.5 (01)
	Buena Vista	561	572.1 (70)	487.0 (31)	Jefferson	404	520.0 (88)	418.9 (94)
	Butler	468	638.1 (38)	449.3 (78)	Keokuk	327	604.7 (56)	438.1 (86)
	Calhoun	377	746.0 (06)	483.6 (36)	Kossuth	539	686.8 (19)	482.7 (40)
	Cass	416	597.8 (60)	408.5 (97)	Louisa	327	553.4 (73)	488.5 (28)
	Cedar	550	611.4 (52)	490.4 (24)	Lyon	352	620.7 (49)	483.8 (35)
	Cherokee	387	653.6 (30)	428.1 (92)	Mitchell	352	651.1 (33)	444.1 (81)
	Chickasaw	415	677.9 (24)	515.6 (07)	Montgomery	364	659.4 (28)	469.1 (59)
	Clay	543	648.9 (35)	475.1 (52)	O'Brien	533	753.6 (05)	515.6 (07)
	Clayton	547	615.3 (50)	449.5 (77)	Page	603	758.6 (03)	529.4 (02)
	Crawford	483	584.4 (64)	466.0 (62)	Poweshiek	537	576.2 (69)	443.0 (84)
	Delaware	512	583.0 (65)	480.3 (43)	Sac	371	710.6 (13)	462.5 (66)
	Dickinson	604	728.3 (08)	482.8 (39)	Shelby	398	644.2 (37)	444.1 (81)
	Emmet	331	635.9 (40)	487.0 (31)	Tama	579	651.7 (32)	494.0 (19)
	Floyd	505	621.0 (48)	459.6 (68)	Union	367	611.1 (53)	448.8 (80)
	Franklin	352	663.3 (26)	479.9 (45)	Winnebago	299	546.0 (76)	405.4 (98)
	Hamilton	454	578.0 (67)	452.3 (75)	Wright	473	716.5 (11)	496.8 (15)
	Hancock	370	645.5 (36)	488.1 (30)	<b>Total</b>	16,502	642.5	470.3
Counties with Average Population > 20,000	Boone	737	561.5 (72)	468.4 (60)	Lee	1,146	637.4 (39)	493.4 (22)
	Buchanan	574	549.3 (74)	476.7 (47)	Mahaska	606	548.3 (75)	462.6 (65)
	Carroll	618	594.0 (61)	437.2 (87)	Marion	858	526.9 (84)	451.8 (76)
	Cerro Gordo	1,477	669.3 (25)	507.9 (10)	Marshall	1,178	602.8 (58)	483.9 (34)
	Clinton	1,482	602.2 (59)	493.8 (21)	Muscatine	1,063	503.5 (92)	474.3 (53)
	Des Moines	1,275	627.5 (44)	489.0 (27)	Plymouth	715	584.8 (63)	485.5 (33)
	Fayette	679	657.4 (29)	468.3 (61)	Sioux	811	507.0 (91)	456.3 (70)
	Henry	533	530.2 (83)	454.0 (73)	Wapello	1,086	611.0 (54)	488.3 (29)
	Jackson	623	624.2 (45)	483.5 (37)	Webster	1,112	576.5 (68)	471.6 (55)
	Jasper	1,110	603.2 (57)	490.2 (25)	Winneshiek	567	544.8 (79)	443.1 (83)
					<b>Total</b>	18,250	586.1	477.1
MSA Counties	Benton	689	518.4 (89)	453.3 (74)	Linn	5,013	494.5 (93)	480.1 (44)
	Black Hawk	3427	540.8 (81)	499.0 (14)	Madison	394	521.5 (87)	465.3 (63)
	Bremer	614	522.8 (85)	418.0 (96)	Mills	388	517.7 (90)	472.3 (54)
	Dallas	1,178	431.5 (97)	523.1 (03)	Polk	9,140	447.1 (96)	470.6 (56)
	Dubuque	2,496	545.2 (78)	476.2 (49)	Pottawattamie	2,437	545.6 (77)	494.0 (19)
	Grundy	420	689.7 (18)	504.1 (13)	Scott	4,308	533.4 (82)	514.9 (09)
	Guthrie	380	682.5 (21)	479.1 (46)	Story	1,494	356.9 (98)	433.7 (89)
	Harrison	512	662.7 (27)	519.9 (04)	Warren	1,077	494.2 (94)	469.9 (57)
	Johnson	2,202	356.4 (99)	475.7 (51)	Washington	646	612.2 (51)	491.4 (23)
	Jones	554	544.1 (80)	438.5 (85)	Woodbury	2,469	485.7 (95)	469.7 (58)
					<b>Total</b>	39,838	483.4	479.2
<b>State Total</b>		80,505	542.9	476.1				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program



# All Cancer Incidence by County Group 1976-2008



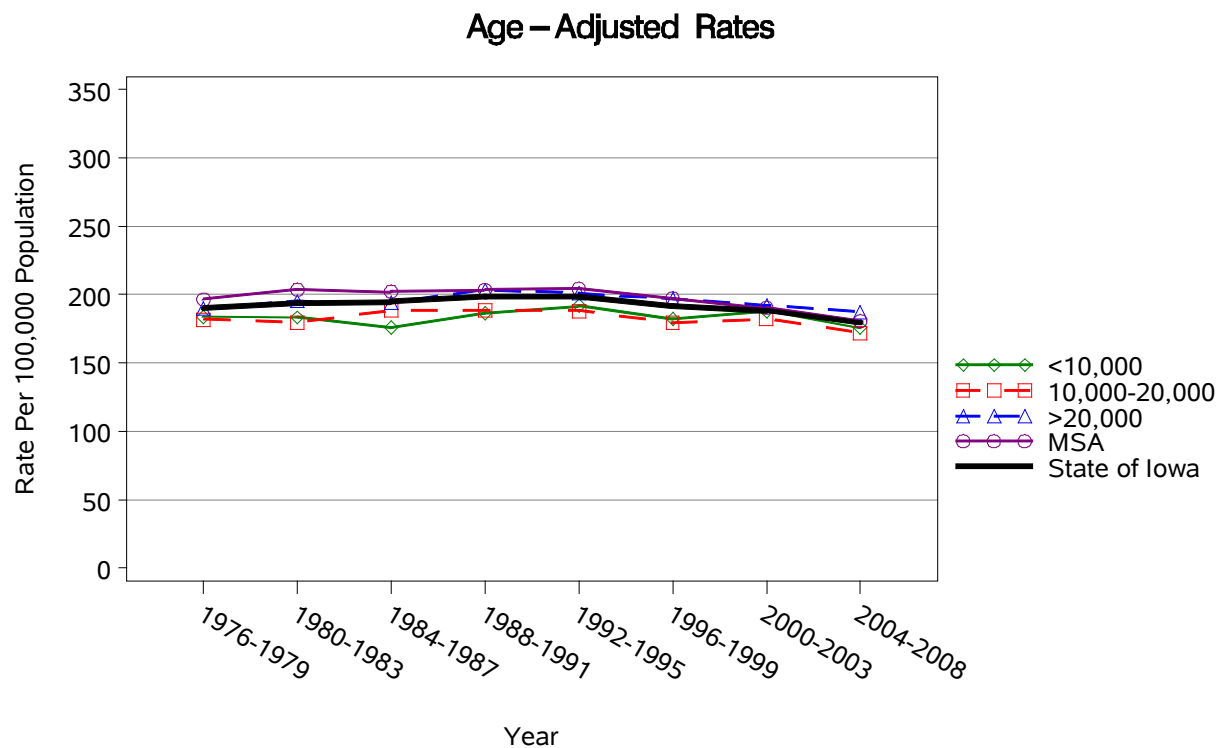
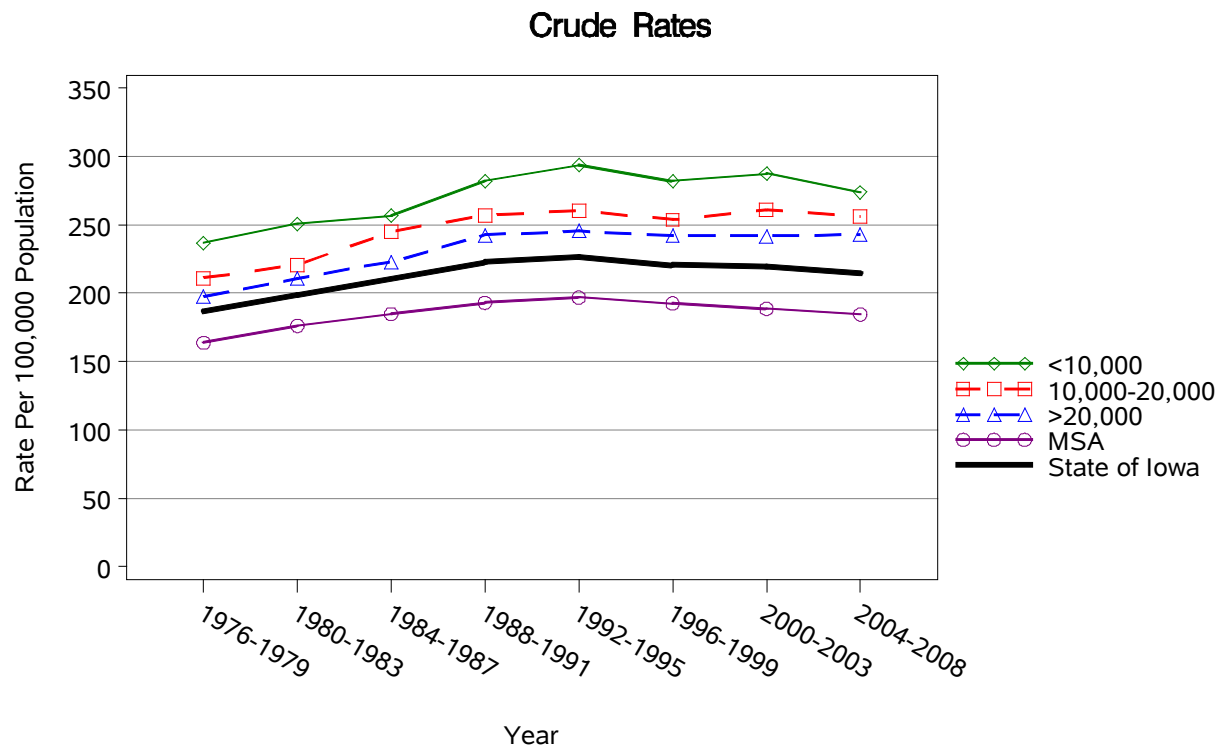
## All Cancer Mortality 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	118	308.3 (11)	195.9 (15)	Lucas	123	259.0 (38)	178.4 (44)
	Adams	57	275.5 (23)	177.5 (48)	Monona	147	318.0 (04)	176.1 (51)
	Audubon	104	335.0 (01)	197.5 (13)	Monroe	112	292.5 (16)	200.0 (09)
	Clarke	102	224.3 (70)	173.2 (60)	Osceola	90	274.0 (25)	198.0 (12)
	Davis	85	198.9 (87)	152.7 (91)	Palo Alto	135	284.9 (18)	175.1 (57)
	Decatur	100	239.1 (58)	173.5 (59)	Pocahontas	120	311.7 (07)	184.5 (34)
	Fremont	78	206.9 (82)	134.6 (98)	Ringgold	79	308.4 (10)	168.6 (65)
	Greene	129	268.1 (30)	160.3 (79)	Taylor	84	258.4 (39)	155.8 (87)
	Howard	113	236.8 (62)	156.8 (85)	Van Buren	120	313.4 (05)	211.1 (03)
	Humboldt	130	267.0 (32)	163.2 (72)	Wayne	105	329.5 (02)	192.0 (24)
	Ida	106	299.5 (13)	175.5 (56)	Worth	105	274.4 (24)	198.2 (11)
					<b>Total</b>	2,342	273.9	175.8
Counties with Average Population 10,000 – 20,000	Allamakee	176	244.2 (53)	168.9 (64)	Hardin	268	303.5 (12)	192.6 (23)
	Appanoose	196	299.1 (14)	195.8 (16)	Iowa	207	261.4 (35)	187.3 (29)
	Buena Vista	212	216.2 (77)	167.7 (68)	Jefferson	156	200.8 (86)	154.1 (89)
	Butler	188	256.3 (43)	163.2 (72)	Keokuk	121	223.8 (71)	150.0 (94)
	Calhoun	156	308.7 (09)	176.0 (52)	Kossuth	224	285.4 (17)	174.4 (58)
	Cass	181	260.1 (37)	162.2 (75)	Louisa	154	260.6 (36)	219.7 (01)
	Cedar	194	215.7 (79)	161.4 (77)	Lyon	125	220.4 (74)	156.8 (85)
	Cherokee	176	297.3 (15)	180.1 (41)	Mitchell	132	244.2 (53)	148.9 (95)
	Chickasaw	136	222.2 (73)	158.5 (82)	Montgomery	131	237.3 (61)	160.6 (78)
	Clay	226	270.1 (28)	182.1 (38)	O'Brien	199	281.4 (19)	177.1 (49)
	Clayton	243	273.3 (26)	184.0 (35)	Page	255	320.8 (03)	207.7 (04)
	Crawford	210	254.1 (45)	195.0 (17)	Poweshiek	227	243.6 (55)	175.6 (54)
	Delaware	178	202.7 (85)	156.9 (84)	Sac	163	312.2 (06)	178.3 (46)
	Dickinson	209	252.0 (49)	155.3 (88)	Shelby	171	276.8 (22)	172.3 (61)
	Emmet	132	253.6 (46)	171.6 (62)	Tama	248	279.1 (21)	190.3 (27)
	Floyd	194	238.6 (59)	159.3 (81)	Union	144	239.8 (57)	163.6 (71)
	Franklin	128	241.2 (56)	157.0 (83)	Winnebago	124	226.4 (69)	152.5 (92)
	Hamilton	195	248.3 (50)	176.7 (50)	Wright	205	310.5 (08)	182.0 (39)
	Hancock	126	219.8 (75)	151.2 (93)	<b>Total</b>	6,710	256.3	172.0
Counties with Average Population > 20,000	Boone	313	238.5 (60)	188.1 (28)	Lee	474	263.6 (33)	197.5 (13)
	Buchanan	246	235.4 (63)	193.8 (19)	Mahaska	238	215.3 (80)	175.9 (53)
	Carroll	282	271.1 (27)	177.9 (47)	Marion	376	230.9 (65)	185.0 (33)
	Cerro Gordo	569	257.8 (42)	183.9 (36)	Marshall	497	254.3 (44)	194.2 (18)
	Clinton	606	246.3 (52)	191.9 (25)	Muscatine	471	223.1 (72)	211.2 (02)
	Des Moines	534	262.8 (34)	193.4 (21)	Plymouth	283	231.5 (64)	179.0 (42)
	Fayette	290	280.8 (20)	185.9 (31)	Sioux	270	168.8 (96)	141.4 (96)
	Henry	228	226.8 (68)	183.6 (37)	Wapello	475	267.3 (31)	202.6 (06)
	Jackson	246	246.5 (51)	181.1 (40)	Webster	498	258.2 (40)	198.7 (10)
	Jasper	475	258.1 (41)	202.2 (07)	Winneshiek	193	185.4 (91)	133.7 (99)
					<b>Total</b>	7,564	242.9	187.1
MSA Counties	Benton	247	185.9 (90)	153.8 (90)	Linn	1,853	182.8 (92)	175.6 (54)
	Black Hawk	1,333	210.4 (81)	186.2 (30)	Madison	154	203.8 (83)	178.4 (44)
	Bremer	220	187.3 (89)	136.7 (97)	Mills	129	172.1 (95)	159.4 (80)
	Dallas	408	149.4 (97)	193.6 (20)	Polk	3,571	174.7 (94)	185.5 (32)
	Dubuque	999	218.2 (76)	178.9 (43)	Pottawattamie	1,019	228.1 (67)	203.2 (05)
	Grundy	154	252.9 (48)	168.5 (66)	Scott	1,591	197.0 (88)	190.9 (26)
	Guthrie	141	253.2 (47)	170.0 (63)	Story	584	139.5 (98)	162.1 (76)
	Harrison	208	269.2 (29)	202.0 (08)	Warren	386	177.1 (93)	168.4 (67)
	Johnson	712	115.2 (99)	162.8 (74)	Washington	243	230.3 (66)	165.0 (69)
	Jones	220	216.1 (78)	164.5 (70)	Woodbury	1,036	203.8 (83)	192.8 (22)
	<b>State Total</b>	31,824	214.6	179.8	<b>Total</b>	15,208	184.5	180.7

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# All Cancer Mortality by County Group 1976-2008



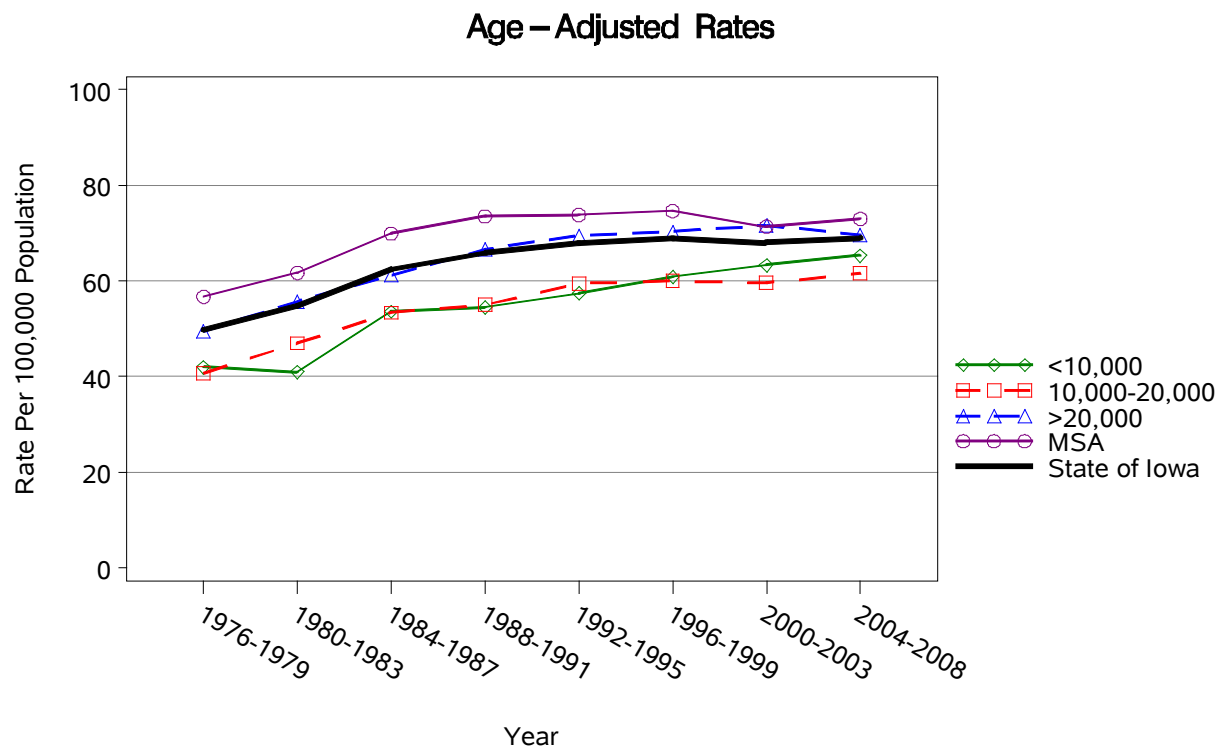
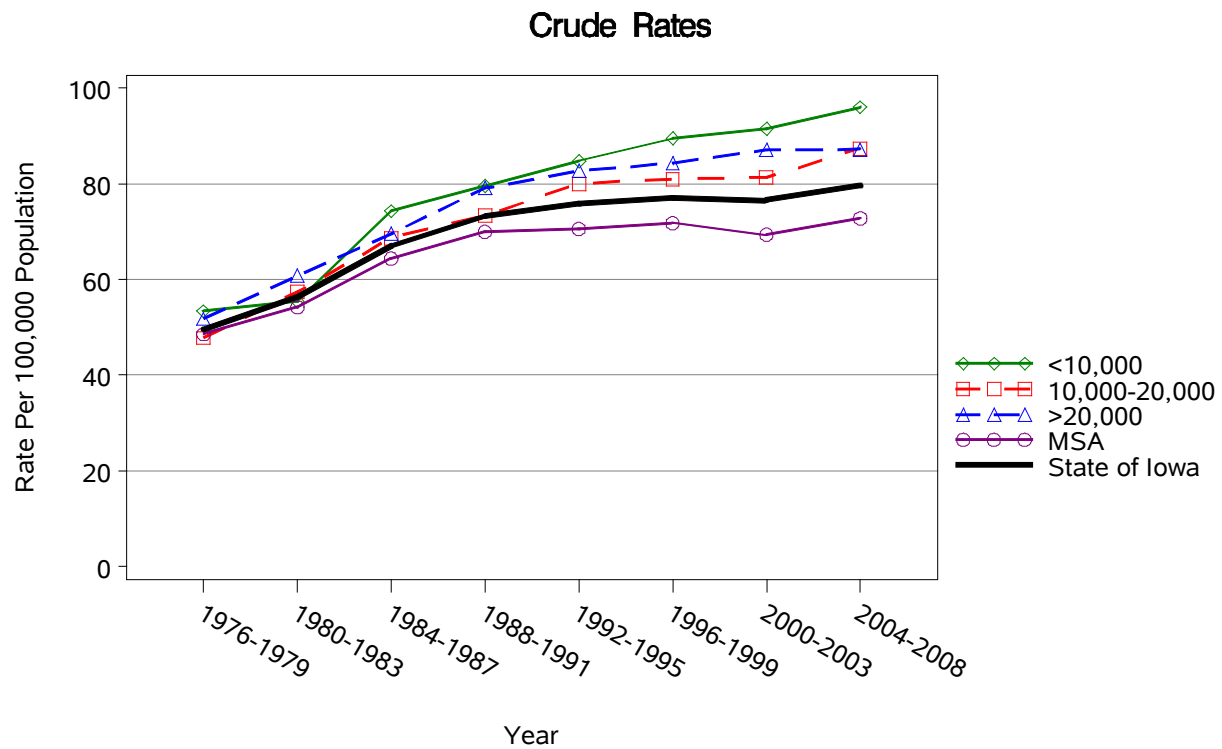
## Lung Cancer Incidence 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	45	117.6 (04)	80.5 (10)	Lucas	38	80.0 (61)	58.9 (66)
	Adams	20	96.7 (28)	63.5 (55)	Monona	49	106.0 (12)	66.2 (46)
	Audubon	36	116.0 (05)	72.8 (28)	Monroe	56	146.2 (01)	100.9 (01)
	Clarke	34	74.8 (72)	61.1 (62)	Osceola	29	88.3 (43)	65.6 (47)
	Davis	23	53.8 (96)	46.0 (96)	Palo Alto	49	103.4 (16)	67.5 (43)
	Decatur	36	86.1 (50)	63.9 (53)	Pocahontas	35	90.9 (37)	55.1 (78)
	Fremont	37	98.2 (25)	64.1 (52)	Ringgold	36	140.6 (02)	81.7 (08)
	Greene	52	108.1 (09)	70.4 (35)	Taylor	24	73.8 (74)	44.8 (97)
	Howard	33	69.2 (85)	47.4 (93)	Van Buren	44	114.9 (07)	78.9 (13)
	Humboldt	50	102.7 (17)	68.6 (38)	Wayne	44	138.1 (03)	86.2 (03)
	Ida	26	73.5 (75)	46.3 (95)	Worth	25	65.3 (91)	48.5 (90)
					<b>Total</b>	821	96	65.3
Counties with Average Population 10,000 – 20,000	Allamakee	51	70.8 (82)	51.1 (86)	Hardin	92	104.2 (15)	72.7 (29)
	Appanoose	75	114.4 (08)	80.1 (11)	Iowa	73	92.2 (34)	72.4 (31)
	Buena Vista	68	69.3 (84)	61.0 (63)	Jefferson	55	70.8 (82)	58.4 (71)
	Butler	65	88.6 (41)	60.3 (64)	Keokuk	45	83.2 (56)	58.9 (66)
	Calhoun	51	100.9 (22)	62.1 (58)	Kossuth	67	85.4 (51)	56.1 (75)
	Cass	66	94.8 (32)	58.5 (70)	Louisa	51	86.3 (48)	74.6 (21)
	Cedar	71	78.9 (64)	61.4 (60)	Lyon	36	63.5 (92)	49.6 (88)
	Cherokee	50	84.4 (54)	52.6 (83)	Mitchell	36	66.6 (89)	44.2 (98)
	Chickasaw	59	96.4 (30)	67.8 (40)	Montgomery	50	90.6 (38)	64.3 (51)
	Clay	83	99.2 (24)	69.0 (37)	O'Brien	61	86.2 (49)	59.2 (65)
	Clayton	59	66.4 (90)	47.2 (94)	Page	83	104.4 (14)	71.4 (33)
	Crawford	59	71.4 (81)	55.6 (76)	Poweshiek	63	67.6 (88)	51.5 (84)
	Delaware	86	97.9 (26)	76.2 (19)	Sac	46	88.1 (44)	54.3 (81)
	Dickinson	66	79.6 (63)	49.2 (89)	Shelby	48	77.7 (67)	52.7 (82)
	Emmet	53	101.8 (21)	73.4 (26)	Tama	85	95.7 (31)	73.9 (24)
	Floyd	71	87.3 (46)	62.6 (56)	Union	58	96.6 (29)	67.7 (41)
	Franklin	47	88.6 (41)	58.8 (68)	Winnebago	40	73.0 (76)	51.3 (85)
	Hamilton	72	91.7 (35)	69.2 (36)	Wright	76	115.1 (06)	76.4 (18)
	Hancock	46	80.3 (60)	54.4 (80)	<b>Total</b>	2,245	87.4	61.6
Counties with Average Population > 20,000	Boone	131	99.8 (23)	83.1 (06)	Lee	184	102.3 (19)	78.4 (16)
	Buchanan	84	80.4 (59)	68.5 (39)	Mahaska	94	85.0 (52)	72.2 (32)
	Carroll	81	77.9 (66)	55.1 (78)	Marion	118	72.5 (78)	62.5 (57)
	Cerro Gordo	200	90.6 (38)	65.1 (49)	Marshall	160	81.9 (57)	63.6 (54)
	Clinton	220	89.4 (40)	70.8 (34)	Muscatine	161	76.3 (69)	72.7 (29)
	Des Moines	216	106.3 (10)	80.6 (09)	Plymouth	92	75.3 (71)	61.2 (61)
	Fayette	97	93.9 (33)	64.6 (50)	Sioux	66	41.3 (98)	36.1 (99)
	Henry	88	87.5 (45)	74.6 (21)	Wapello	189	106.3 (10)	84.3 (04)
	Jackson	78	78.1 (65)	58.3 (72)	Webster	198	102.7 (17)	82.9 (07)
	Jasper	193	104.9 (13)	83.8 (05)	Winneshiek	64	61.5 (94)	48.5 (90)
					<b>Total</b>	2,714	87.2	69.6
MSA Counties	Benton	91	68.5 (86)	58.8 (68)	Linn	781	77.0 (68)	75.5 (20)
	Black Hawk	548	86.5 (47)	78.7 (15)	Madison	63	83.4 (55)	73.3 (27)
	Bremer	73	62.2 (93)	48.4 (92)	Mills	54	72.0 (79)	66.9 (44)
	Dallas	153	56.0 (95)	74.2 (23)	Polk	1,489	72.8 (77)	78.9 (13)
	Dubuque	369	80.6 (58)	67.6 (42)	Pottawattamie	437	97.8 (27)	88.7 (02)
	Grundy	45	73.9 (73)	50.9 (87)	Scott	644	79.7 (62)	77.7 (17)
	Guthrie	51	91.6 (36)	61.8 (59)	Story	192	45.9 (97)	56.7 (74)
	Harrison	79	102.2 (20)	79.5 (12)	Warren	149	68.4 (87)	65.3 (48)
	Johnson	238	38.5 (99)	56.8 (73)	Washington	76	72.0 (79)	55.5 (77)
	Jones	86	84.5 (53)	66.4 (45)	Woodbury	385	75.7 (70)	73.7 (25)
					<b>Total</b>	6,003	72.8	73
	<b>State Total</b>	11,801	79.6	69				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Lung Cancer Incidence by County Group 1976-2008



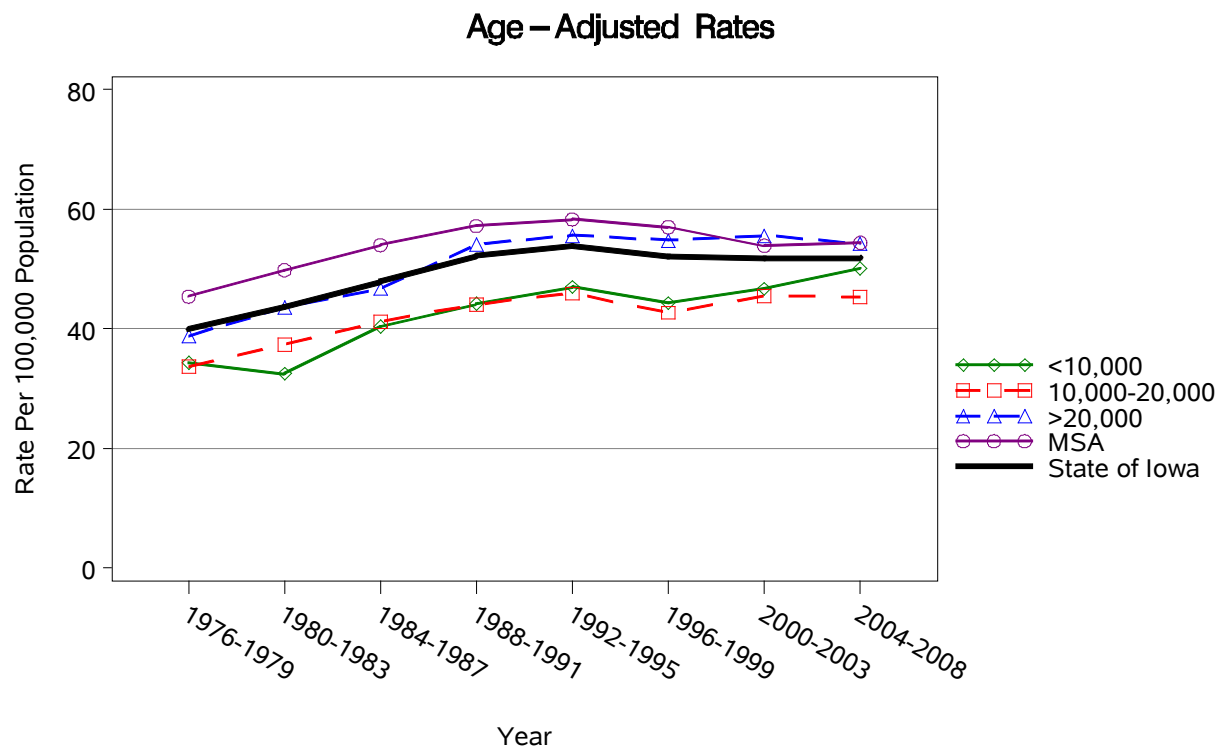
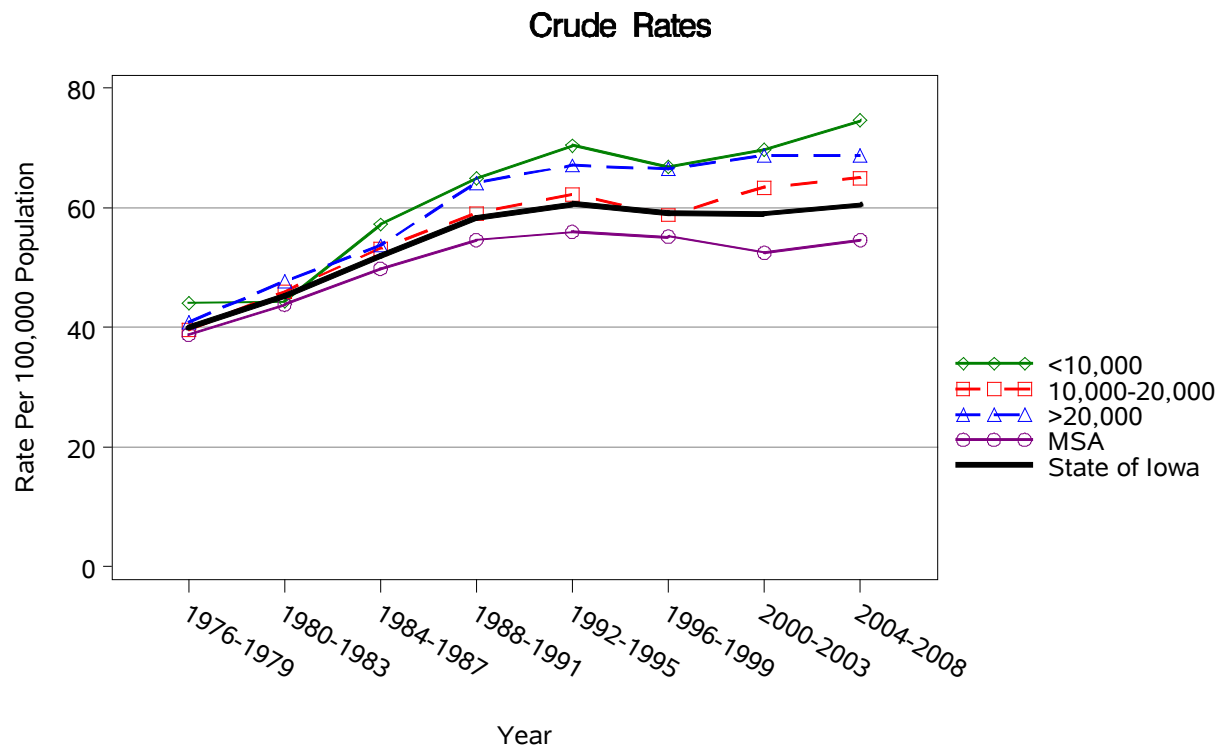
## Lung Cancer Mortality 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	36	94.1 (05)	61.7 (09)	Lucas	32	67.4 (42)	49.7 (46)
	Adams	13	62.8 (59)	41.1 (78)	Monona	33	71.4 (31)	41.1 (78)
	Audubon	28	90.2 (09)	56.8 (21)	Monroe	39	101.8 (03)	70.3 (03)
	Clarke	26	57.2 (72)	46.9 (55)	Osceola	23	70.0 (33)	51.5 (42)
	Davis	20	46.8 (90)	40.9 (80)	Palo Alto	34	71.7 (30)	46.8 (57)
	Decatur	25	59.8 (69)	45.1 (62)	Pocahontas	26	67.5 (41)	45.0 (63)
	Fremont	31	82.2 (18)	54.8 (30)	Ringgold	27	105.4 (02)	57.0 (20)
	Greene	48	99.8 (04)	60.3 (13)	Taylor	18	55.4 (77)	35.9 (89)
	Howard	24	50.3 (86)	32.6 (96)	Van Buren	41	107.1 (01)	73.8 (01)
	Humboldt	40	82.2 (18)	56.5 (22)	Wayne	29	91.0 (07)	51.8 (40)
	Ida	20	56.5 (74)	32.7 (95)	Worth	25	65.3 (48)	49.2 (47)
					<b>Total</b>	638	74.6	50.1
Counties with Average Population 10,000 – 20,000	Allamakee	49	68.0 (40)	47.0 (54)	Hardin	75	84.9 (12)	58.4 (18)
	Appanoose	54	82.4 (17)	56.1 (24)	Iowa	34	42.9 (94)	33.3 (93)
	Buena Vista	48	48.9 (89)	43.3 (72)	Jefferson	46	59.2 (71)	47.1 (53)
	Butler	50	68.2 (39)	44.5 (68)	Keokuk	36	66.6 (45)	47.7 (51)
	Calhoun	47	93.0 (06)	54.6 (31)	Kossuth	57	72.6 (29)	46.5 (59)
	Cass	43	61.8 (63)	39.7 (87)	Louisa	44	74.5 (24)	64.2 (06)
	Cedar	56	62.2 (60)	48.5 (48)	Lyon	25	44.1 (93)	33.6 (92)
	Cherokee	45	76.0 (22)	44.8 (64)	Mitchell	24	44.4 (91)	29.5 (98)
	Chickasaw	34	55.5 (76)	38.6 (88)	Montgomery	37	67.0 (43)	47.4 (52)
	Clay	71	84.8 (13)	58.6 (17)	O'Brien	42	59.4 (70)	40.0 (85)
	Clayton	44	49.5 (87)	34.6 (90)	Page	61	76.7 (21)	53.1 (37)
	Crawford	54	65.3 (48)	51.2 (43)	Poweshiek	53	56.9 (73)	42.5 (74)
	Delaware	48	54.7 (78)	41.6 (77)	Sac	28	53.6 (82)	33.1 (94)
	Dickinson	57	68.7 (38)	41.8 (76)	Shelby	39	63.1 (57)	40.9 (80)
	Emmet	36	69.2 (36)	50.3 (45)	Tama	54	60.8 (66)	44.7 (66)
	Floyd	54	66.4 (46)	45.7 (61)	Union	42	69.9 (34)	48.3 (49)
	Franklin	33	62.2 (60)	40.4 (82)	Winnebago	35	63.9 (54)	43.8 (70)
	Hamilton	54	68.8 (37)	50.6 (44)	Wright	56	84.8 (13)	54.0 (34)
	Hancock	37	64.6 (51)	43.9 (69)	<b>Total</b>	1,702	65.0	45.3
Counties with Average Population > 20,000	Boone	96	73.1 (28)	59.3 (14)	Lee	133	74.0 (25)	55.9 (26)
	Buchanan	67	64.1 (53)	54.3 (32)	Mahaska	71	64.2 (52)	54.9 (29)
	Carroll	66	63.4 (56)	43.2 (73)	Marion	109	66.9 (44)	56.3 (23)
	Cerro Gordo	162	73.4 (27)	52.8 (39)	Marshall	120	61.4 (64)	48.3 (49)
	Clinton	171	69.5 (35)	55.1 (28)	Muscatine	135	63.9 (54)	60.9 (10)
	Des Moines	169	83.2 (16)	62.5 (08)	Plymouth	66	54.0 (80)	42.5 (74)
	Fayette	86	83.3 (15)	56.0 (25)	Sioux	51	31.9 (98)	28.0 (99)
	Henry	74	73.6 (26)	60.7 (12)	Wapello	161	90.6 (08)	71.1 (02)
	Jackson	54	54.1 (79)	39.8 (86)	Webster	144	74.7 (23)	59.2 (15)
	Jasper	164	89.1 (11)	70.2 (04)	Winneshiek	40	38.4 (95)	30.7 (97)
					<b>Total</b>	2,139	68.7	54.2
MSA Counties	Benton	71	53.4 (83)	44.8 (64)	Linn	564	55.6 (75)	54.2 (33)
	Black Hawk	394	62.2 (60)	55.6 (27)	Madison	46	60.9 (65)	53.6 (36)
	Bremer	52	44.3 (92)	33.7 (91)	Mills	38	50.7 (85)	46.9 (55)
	Dallas	95	34.8 (97)	46.1 (60)	Polk	1,098	53.7 (81)	58.3 (19)
	Dubuque	297	64.9 (50)	53.7 (35)	Pottawattamie	316	70.7 (32)	63.9 (07)
	Grundy	37	60.8 (66)	40.1 (83)	Scott	490	60.7 (68)	59.2 (15)
	Guthrie	44	79.0 (20)	53.1 (37)	Story	148	35.4 (96)	43.4 (71)
	Harrison	69	89.3 (10)	66.9 (05)	Warren	107	49.1 (88)	46.8 (57)
	Johnson	188	30.4 (99)	44.7 (66)	Washington	56	53.1 (84)	40.1 (83)
	Jones	67	65.8 (47)	51.7 (41)	Woodbury	320	63.0 (58)	60.9 (10)
					<b>Total</b>	4,497	54.6	54.4
	<b>State Total</b>	8,976	60.5	51.9				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Lung Cancer Mortality by County Group 1976-2008





## Prostate Cancer Incidence 2004-2008

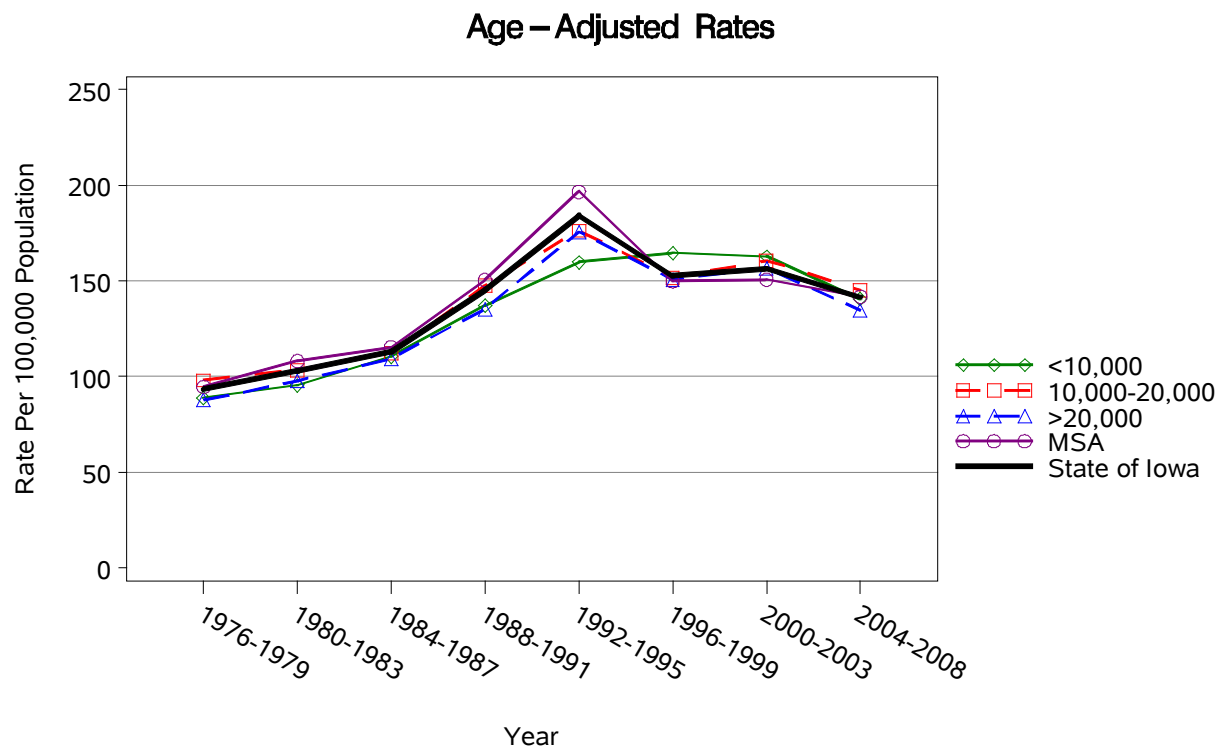
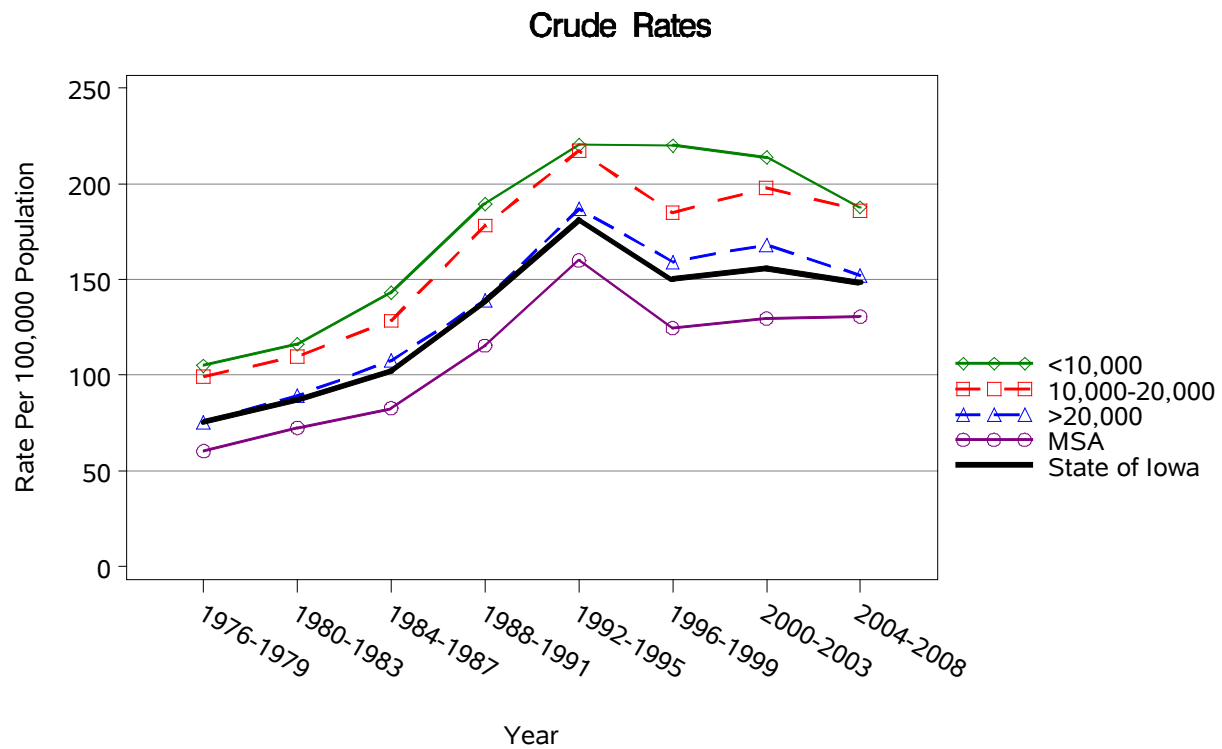
	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	43	229.3 (09)	160.2 (23)	Lucas	44	188.7 (30)	150.6 (35)
	Adams	16	155.9 (62)	109.0 (93)	Monona	48	212.9 (18)	141.2 (47)
	Audubon	39	261.9 (03)	178.9 (09)	Monroe	32	170.3 (45)	129.1 (65)
	Clarke	31	137.4 (81)	120.4 (81)	Osceola	29	178.3 (37)	149.1 (37)
	Davis	36	168.6 (47)	145.1 (40)	Palo Alto	60	258.0 (04)	192.8 (05)
	Decatur	25	121.3 (91)	106.8 (94)	Pocahontas	54	284.0 (02)	197.9 (03)
	Fremont	32	170.5 (44)	125.7 (69)	Ringgold	16	128.1 (89)	82.6 (99)
	Greene	33	140.1 (76)	105.7 (95)	Taylor	36	225.8 (11)	164.1 (17)
	Howard	34	143.2 (73)	111.6 (91)	Van Buren	30	156.8 (60)	117.0 (87)
	Humboldt	41	170.2 (46)	130.7 (62)	Wayne	37	243.3 (07)	160.5 (22)
	Ida	42	243.8 (06)	175.4 (11)	Worth	32	167.4 (48)	132.1 (60)
					<b>Total</b>	790	187.7	140.7
Counties with Average Population 10,000 – 20,000	Allamakee	85	231.5 (08)	183.4 (08)	Hardin	70	161.1 (54)	124.7 (75)
	Appanoose	54	171.8 (42)	125.4 (71)	Iowa	82	210.7 (19)	177.8 (10)
	Buena Vista	113	227.8 (10)	216.7 (01)	Jefferson	52	135.9 (83)	119.4 (83)
	Butler	68	186.8 (32)	140.0 (49)	Keokuk	44	166.0 (51)	132.3 (59)
	Calhoun	57	223.1 (12)	158.9 (24)	Kossuth	85	220.1 (14)	154.0 (30)
	Cass	53	155.3 (63)	113.2 (89)	Louisa	38	128.6 (88)	122.8 (77)
	Cedar	83	186.4 (33)	156.1 (26)	Lyon	63	221.9 (13)	193.1 (04)
	Cherokee	50	171.5 (43)	121.2 (79)	Mitchell	55	206.6 (21)	155.0 (28)
	Chickasaw	76	247.8 (05)	192.2 (07)	Montgomery	36	136.3 (82)	103.6 (97)
	Clay	82	200.9 (22)	161.7 (20)	O'Brien	70	200.1 (23)	151.2 (31)
	Clayton	82	185.5 (34)	139.7 (52)	Page	85	208.5 (20)	162.8 (18)
	Crawford	90	215.0 (17)	192.7 (06)	Poweshiek	58	128.7 (87)	104.3 (96)
	Delaware	64	146.0 (68)	125.5 (70)	Sac	49	190.7 (29)	131.6 (61)
	Dickinson	128	314.1 (01)	212.6 (02)	Shelby	53	173.7 (41)	125.2 (72)
	Emmet	51	198.5 (25)	162.0 (19)	Tama	77	174.5 (39)	140.3 (48)
	Floyd	79	199.2 (24)	150.8 (34)	Union	44	151.6 (66)	118.6 (84)
	Franklin	39	145.6 (70)	112.0 (90)	Winnebago	42	156.7 (61)	127.2 (66)
	Hamilton	62	158.4 (56)	129.4 (64)	Wright	71	216.6 (16)	166.6 (15)
	Hancock	43	151.7 (65)	122.5 (78)	<b>Total</b>	2,361	185.9	145.2
Counties with Average Population > 20,000	Boone	68	105.2 (97)	95.4 (98)	Lee	146	163.0 (53)	135.9 (57)
	Buchanan	82	157.0 (59)	151.2 (31)	Mahaska	72	129.5 (86)	123.0 (76)
	Carroll	74	145.3 (71)	119.9 (82)	Marion	103	127.0 (90)	116.5 (88)
	Cerro Gordo	189	177.4 (38)	147.9 (38)	Marshall	160	164.8 (52)	140.0 (49)
	Clinton	189	157.7 (57)	136.5 (55)	Muscatine	145	138.0 (79)	143.4 (42)
	Des Moines	165	167.2 (49)	141.9 (46)	Plymouth	98	160.3 (55)	143.4 (42)
	Fayette	112	218.1 (15)	170.8 (12)	Sioux	112	141.9 (75)	142.1 (45)
	Henry	75	146.0 (68)	143.4 (42)	Wapello	126	144.6 (72)	125.2 (72)
	Jackson	86	173.9 (40)	136.7 (54)	Webster	117	119.5 (92)	110.4 (92)
	Jasper	126	134.2 (84)	121.0 (80)	Winneshiek	102	198.0 (26)	170.5 (13)
					<b>Total</b>	2,347	152	134.6
MSA Counties	Benton	99	148.7 (67)	137.5 (53)	Linn	694	139.5 (78)	147.2 (39)
	Black Hawk	480	157.1 (58)	154.2 (29)	Madison	50	132.5 (85)	125.2 (72)
	Bremer	103	179.6 (36)	149.9 (36)	Mills	54	142.5 (74)	133.1 (58)
	Dallas	138	101.2 (98)	136.1 (56)	Polk	1,061	106.6 (96)	125.8 (68)
	Dubuque	372	166.4 (50)	155.1 (27)	Pottawattamie	260	118.8 (93)	117.2 (86)
	Grundy	55	182.7 (35)	143.5 (41)	Scott	614	155.2 (64)	158.6 (25)
	Guthrie	52	187.4 (31)	139.9 (51)	Story	198	92.4 (99)	129.5 (63)
	Harrison	73	192.3 (28)	166.2 (16)	Warren	123	114.8 (94)	117.5 (85)
	Johnson	342	112.2 (95)	161.4 (21)	Washington	100	194.8 (27)	166.8 (14)
	Jones	74	137.9 (80)	126.9 (67)	Woodbury	349	140.1 (76)	150.9 (33)
					<b>Total</b>	5,291	130.7	141.8
<b>State Total</b>		10,861	148.6	141.7				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program



# Prostate Cancer Incidence by County Group 1976-2008



## Prostate Cancer Mortality 2004-2008

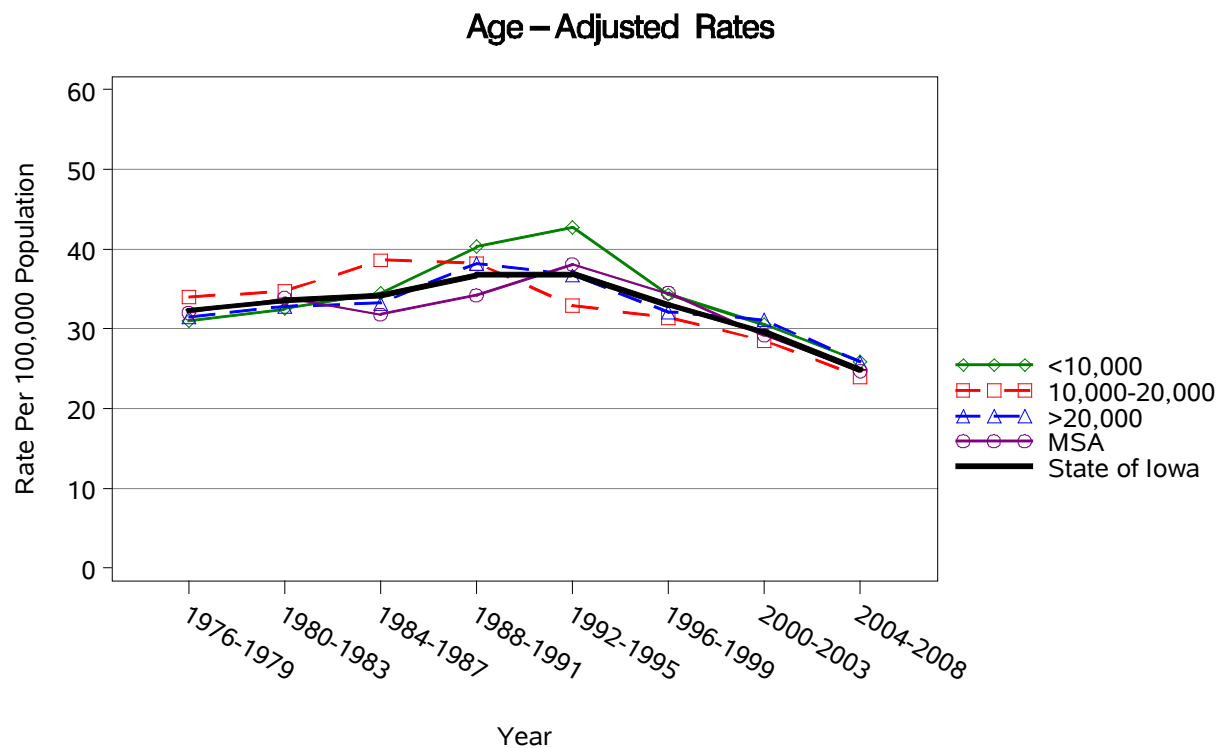
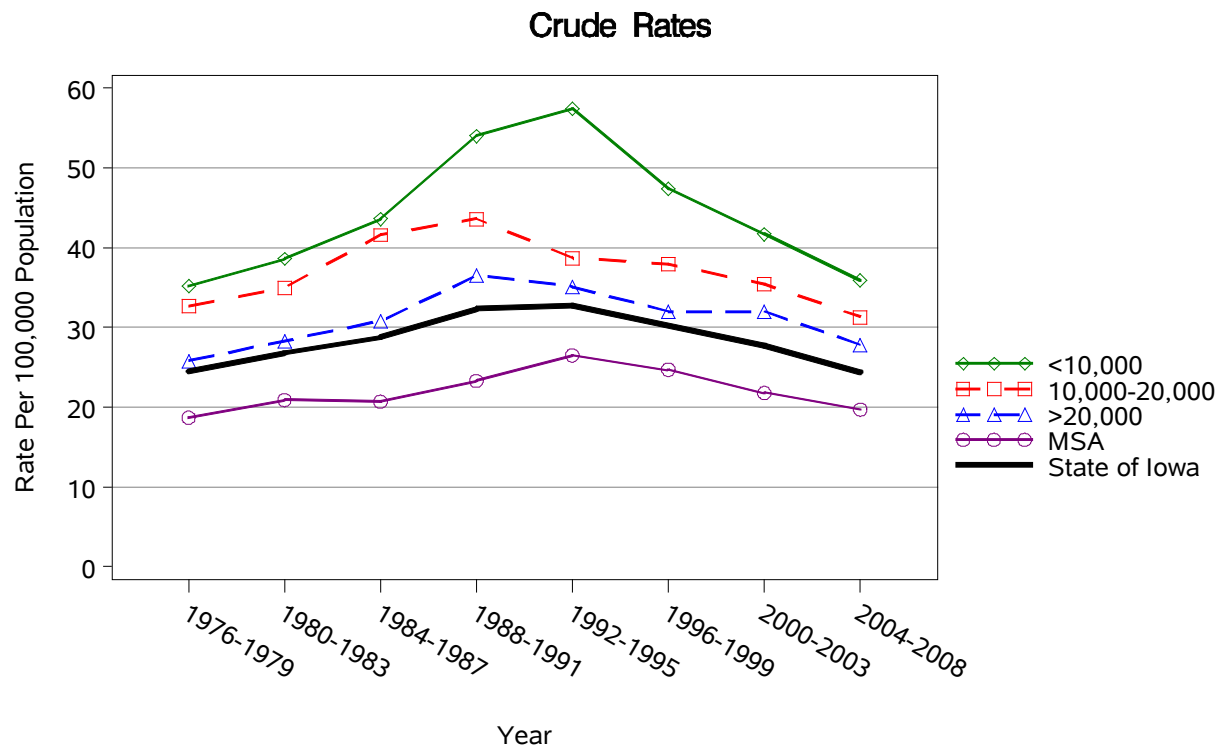
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	11	47.2	37.5
	Adams	5	48.7	31.7	Monona	9	39.9	24.7
	Audubon	8	53.7	35.8	Monroe	*	*	*
	Clarke	8	35.4	31.9	Osceola	*	*	*
	Davis	6	28.1	25.4	Palo Alto	14	60.2	41.6
	Decatur	*	*	*	Pocahontas	8	42.1	27.3
	Fremont	8	42.6	32.7	Ringgold	*	*	*
	Greene	7	29.7	20	Taylor	*	*	*
	Howard	*	*	*	Van Buren	14	73.2	55.1
	Humboldt	5	20.8	15	Wayne	10	65.8	42.1
	Ida	6	34.8	22.3	Worth	9	47.1	39.3
					<b>Total</b>	<b>151</b>	<b>35.9</b>	<b>25.9</b>
Counties with Average Population 10,000 – 20,000	Allamakee	8	21.8	17	Hardin	14	32.2	22.8
	Appanoose	12	38.2	27.6	Iowa	17	43.7	37.4
	Buena Vista	15	30.2	24.9	Jefferson	10	26.1	25.7
	Butler	*	*	*	Keokuk	7	26.4	20.5
	Calhoun	12	47	31.4	Kossuth	13	33.7	23.1
	Cass	9	26.4	17.6	Louisa	8	27.1	29.5
	Cedar	9	20.2	17.6	Lyon	6	21.1	17.1
	Cherokee	10	34.3	25.6	Mitchell	14	52.6	33.4
	Chickasaw	9	29.3	24.1	Montgomery	*	*	*
	Clay	16	39.2	30.1	O'Brien	6	17.2	10.9
	Clayton	18	40.7	31.1	Page	19	46.6	35.8
	Crawford	15	35.8	32.7	Poweshiek	11	24.4	20.3
	Delaware	6	13.7	11.4	Sac	7	27.2	17.5
	Dickinson	12	29.4	19.8	Shelby	6	19.7	12.9
	Emmet	9	35	26	Tama	23	52.1	41
	Floyd	11	27.7	19.6	Union	11	37.9	30.3
	Franklin	7	26.1	19.1	Winnebago	7	26.1	19.7
	Hamilton	17	43.4	34.3	Wright	15	45.8	30.8
	Hancock	9	31.7	25.9	<b>Total</b>	<b>406</b>	<b>31.3</b>	<b>24.0</b>
Counties with Average Population > 20,000	Boone	17	26.3	25.5	Lee	16	17.9	16.6
	Buchanan	8	15.3	14.8	Mahaska	11	19.8	19.1
	Carroll	9	17.7	13.4	Marion	24	29.6	27.2
	Cerro Gordo	27	25.3	22.1	Marshall	40	41.2	39
	Clinton	37	30.9	30.1	Muscatine	33	31.4	43.2
	Des Moines	31	31.4	28.9	Plymouth	17	27.8	25.6
	Fayette	19	37	28.3	Sioux	13	16.5	16.5
	Henry	15	29.2	30.2	Wapello	34	39	32.7
	Jackson	18	36.4	30.7	Webster	27	27.6	24.6
	Jasper	16	17	16.9	Winneshiek	17	33	27.2
					<b>Total</b>	<b>429</b>	<b>27.8</b>	<b>25.8</b>
MSA Counties	Benton	12	18	17.6	Linn	95	19.1	22.8
	Black Hawk	63	20.6	21.5	Madison	13	34.4	35.9
	Bremer	24	41.8	37.4	Mills	5	13.2	15.6
	Dallas	17	12.5	22.6	Polk	201	20.2	28
	Dubuque	43	19.2	20.8	Pottawattamie	45	20.6	22.9
	Grundy	8	26.6	20.5	Scott	71	17.9	22.8
	Guthrie	7	25.2	21.3	Story	36	16.8	25.4
	Harrison	9	23.7	20.8	Warren	17	15.9	20.7
	Johnson	44	14.4	27.8	Washington	14	27.3	21.3
	Jones	13	24.2	25.5	Woodbury	61	24.5	30.1
	<b>State Total</b>	<b>1,784</b>	<b>24.4</b>	<b>24.9</b>	<b>Total</b>	<b>798</b>	<b>19.7</b>	<b>24.7</b>

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5

# Prostate Cancer Mortality by County Group 1976-2008



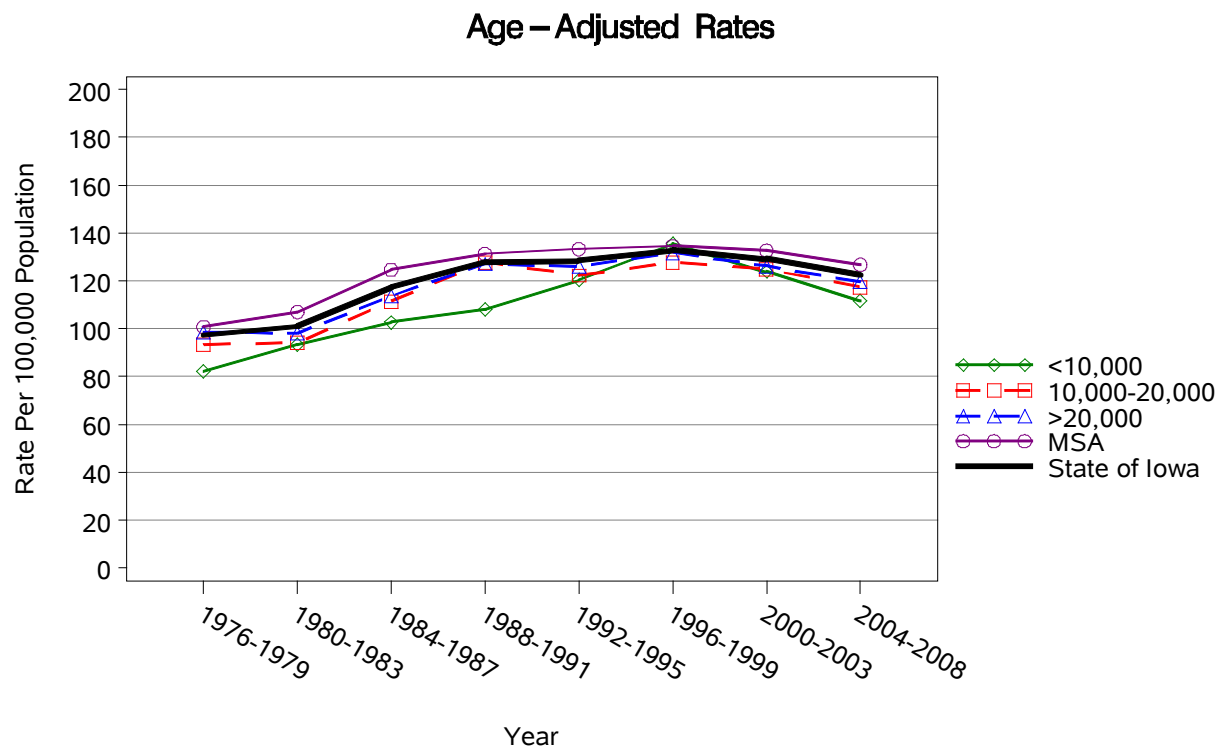
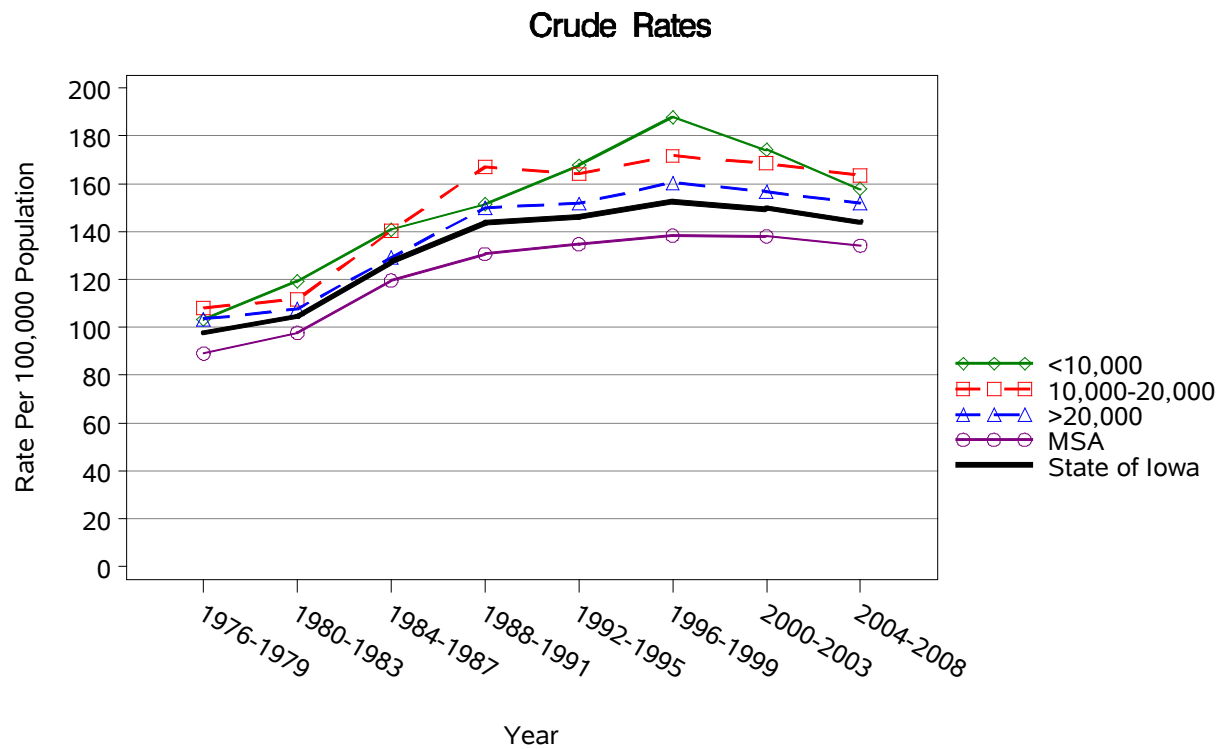
## Female Breast Cancer Incidence 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	28	143.4 (62)	94.3 (90)	Lucas	29	120.0 (89)	87.8 (95)
	Adams	21	201.5 (06)	118.7 (45)	Monona	43	181.6 (18)	116.7 (53)
	Audubon	26	161.0 (41)	106.6 (75)	Monroe	22	112.8 (94)	77.1 (98)
	Clarke	31	135.4 (75)	109.7 (71)	Osceola	33	199.0 (07)	149.8 (03)
	Davis	23	107.6 (97)	91.1 (93)	Palo Alto	40	165.7 (33)	117.0 (52)
	Decatur	38	179.1 (23)	141.2 (08)	Pocahontas	40	205.3 (04)	132.7 (18)
	Fremont	39	206.1 (03)	143.3 (05)	Ringgold	21	160.1 (42)	104.9 (80)
	Greene	29	118.1 (92)	83.8 (96)	Taylor	22	132.9 (77)	100.0 (87)
	Howard	33	137.6 (69)	103.6 (81)	Van Buren	26	135.7 (73)	99.0 (88)
	Humboldt	45	183.0 (15)	118.3 (47)	Wayne	27	162.1 (39)	103.4 (82)
	Ida	39	214.8 (02)	154.9 (01)	Worth	30	156.6 (48)	118.9 (44)
					<b>Total</b>	685	157.8	111.8
Counties with Average Population 10,000 – 20,000	Allamakee	61	172.6 (31)	130.9 (22)	Hardin	78	174.0 (27)	113.6 (62)
	Appanoose	60	175.9 (25)	125.7 (32)	Iowa	65	161.4 (40)	130.3 (24)
	Buena Vista	68	140.3 (65)	113.6 (62)	Jefferson	71	180.1 (22)	140.2 (09)
	Butler	63	170.6 (32)	118.1 (49)	Keokuk	40	145.1 (60)	89.8 (94)
	Calhoun	51	204.1 (05)	118.3 (47)	Kossuth	73	183.1 (14)	116.7 (53)
	Cass	64	180.5 (20)	127.1 (29)	Louisa	40	135.5 (74)	118.0 (50)
	Cedar	70	154.1 (52)	118.7 (45)	Lyon	45	158.9 (45)	124.2 (35)
	Cherokee	48	159.8 (44)	110.6 (68)	Mitchell	50	182.2 (17)	129.2 (25)
	Chickasaw	53	173.5 (28)	124.5 (34)	Montgomery	52	180.6 (19)	131.4 (21)
	Clay	68	158.7 (46)	112.2 (66)	O'Brien	82	229.4 (01)	149.8 (03)
	Clayton	48	107.4 (98)	73.1 (99)	Page	73	188.5 (13)	132.1 (20)
	Crawford	61	149.5 (57)	121.1 (42)	Poweshiek	77	160.0 (43)	115.9 (57)
	Delaware	66	150.1 (56)	123.9 (38)	Sac	52	196.1 (08)	113.1 (65)
	Dickinson	76	180.2 (21)	116.0 (55)	Shelby	60	191.9 (10)	132.2 (19)
	Emmet	40	151.7 (54)	127.7 (28)	Tama	61	136.4 (72)	101.4 (84)
	Floyd	51	122.4 (88)	94.6 (89)	Union	48	154.7 (51)	114.0 (59)
	Franklin	50	190.2 (12)	125.5 (33)	Winnebago	31	110.9 (96)	79.9 (97)
	Hamilton	54	137.1 (70)	105.6 (77)	Wright	52	156.5 (49)	109.8 (70)
	Hancock	42	145.0 (61)	107.9 (74)	<b>Total</b>	2,121	163.4	117.4
Counties with Average Population > 20,000	Boone	109	163.6 (36)	132.9 (17)	Lee	127	140.8 (64)	100.8 (86)
	Buchanan	55	105.2 (99)	91.5 (91)	Mahaska	73	132.9 (77)	106.3 (76)
	Carroll	63	118.7 (91)	91.4 (92)	Marion	133	162.7 (37)	133.2 (16)
	Cerro Gordo	218	191.0 (11)	143.3 (05)	Marshall	150	152.5 (53)	121.6 (41)
	Clinton	219	173.4 (29)	138.1 (11)	Muscatine	127	119.8 (90)	105.0 (79)
	Des Moines	191	182.8 (16)	141.5 (07)	Plymouth	97	158.7 (46)	124.0 (36)
	Fayette	85	163.7 (35)	110.6 (68)	Sioux	112	138.2 (68)	123.6 (39)
	Henry	66	134.2 (76)	109.3 (73)	Wapello	141	155.6 (50)	117.3 (51)
	Jackson	76	150.9 (55)	116.0 (55)	Webster	123	129.5 (82)	101.2 (85)
	Jasper	149	165.2 (34)	122.7 (40)	Winneshiek	72	137.0 (71)	114.9 (58)
					2386	2,121	163.4	117.4
MSA Counties	Benton	84	126.7 (84)	109.5 (72)	Linn	683	132.3 (79)	124.0 (36)
	Black Hawk	409	124.6 (86)	114.0 (59)	Madison	49	129.6 (81)	110.9 (67)
	Bremer	107	178.1 (24)	139.5 (10)	Mills	55	148.4 (59)	134.0 (14)
	Dallas	173	126.6 (85)	133.5 (15)	Polk	1,358	129.4 (83)	126.4 (30)
	Dubuque	326	139.2 (67)	120.4 (43)	Pottawattamie	398	174.8 (26)	151.5 (02)
	Grundy	50	162.3 (38)	113.7 (61)	Scott	613	148.8 (58)	137.3 (13)
	Guthrie	54	193.3 (09)	126.3 (31)	Story	234	114.5 (93)	130.8 (23)
	Harrison	68	173.0 (30)	128.4 (26)	Warren	158	142.6 (63)	128.0 (27)
	Johnson	348	111.2 (95)	137.8 (12)	Washington	76	140.3 (65)	105.3 (78)
	Jones	63	130.8 (80)	102.5 (83)	Woodbury	321	123.9 (87)	113.5 (64)
					<b>Total</b>	5,627	134.2	126.8
	<b>State Total</b>	10,842	144.2	122.5				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Female Breast Cancer Incidence by County Group 1976-2008



## Female Breast Cancer Mortality 2004-2008

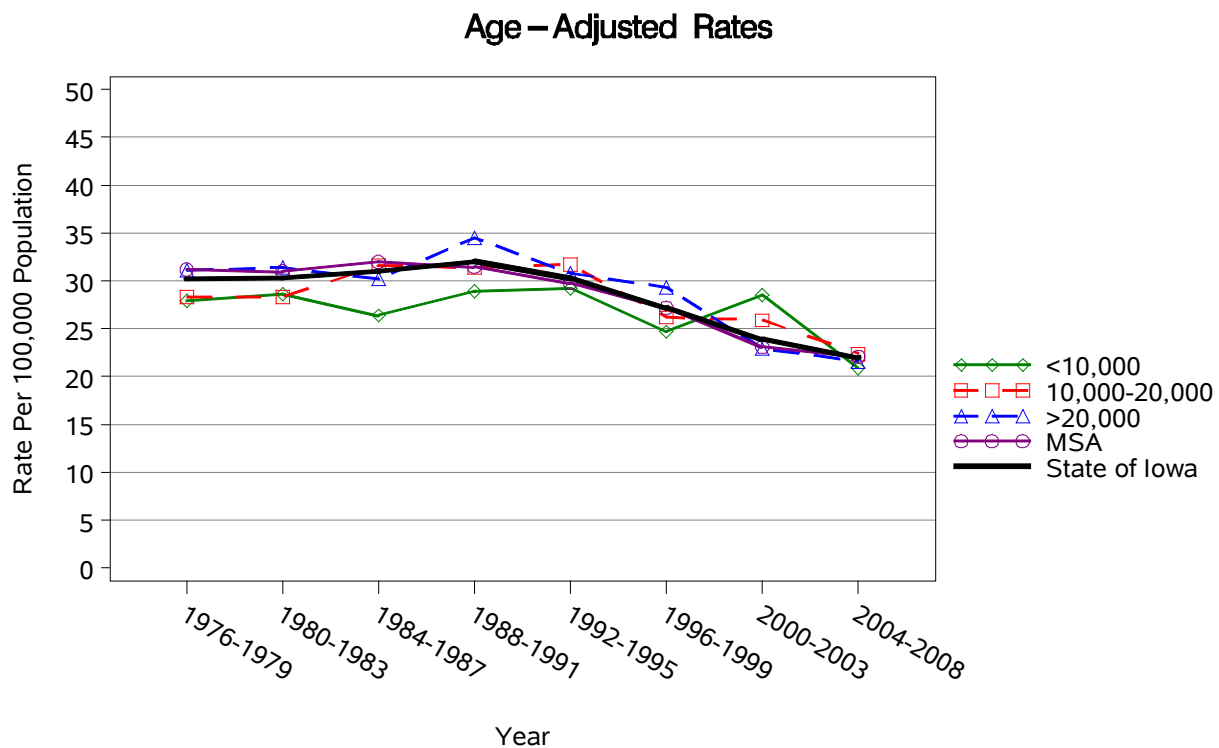
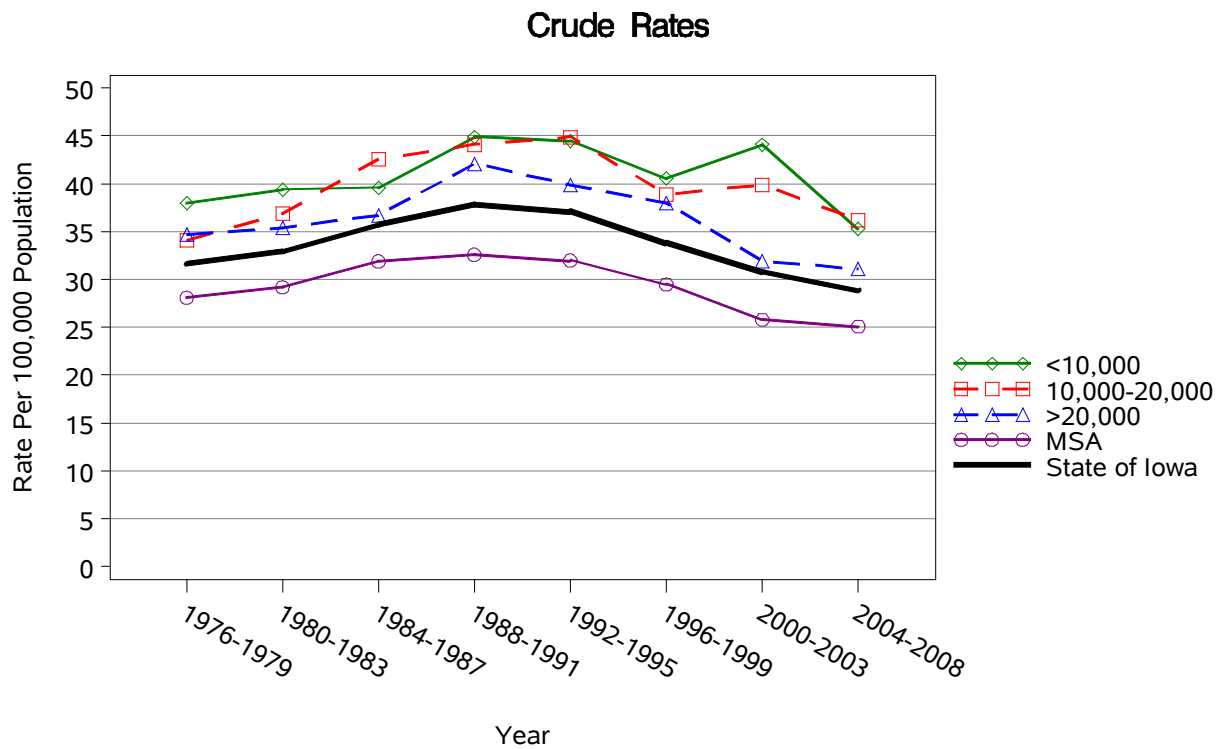
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	6	30.7	17.5	Lucas	17	70.3	40.8
	Adams	*	*	*	Monona	9	38	20.4
	Audubon	6	37.1	19.9	Monroe	*	*	*
	Clarke	5	21.8	15.3	Osceola	14	84.4	54
	Davis	6	28.1	17.2	Palo Alto	11	45.6	21.3
	Decatur	7	33	24.5	Pocahontas	7	35.9	21
	Fremont	*	*	*	Ringgold	5	38.1	18.5
	Greene	*	*	*	Taylor	*	*	*
	Howard	10	41.7	28.3	Van Buren	6	31.3	21
	Humboldt	8	32.5	14.1	Wayne	*	*	*
	Ida	12	66.1	32.8	Worth	5	26.1	17.3
					<b>Total</b>	153	35.3	20.9
Counties with Average Population 10,000 – 20,000	Allamakee	12	34	19	Hardin	28	62.5	36.7
	Appanoose	8	23.5	15.8	Iowa	15	37.2	25.2
	Buena Vista	12	24.8	16.7	Jefferson	10	25.4	19.5
	Butler	9	24.4	15.2	Keokuk	9	32.7	19.8
	Calhoun	11	44	17.5	Kossuth	17	42.6	26.1
	Cass	20	56.4	32.1	Louisa	14	47.4	33.3
	Cedar	11	24.2	17.4	Lyon	11	38.8	23.3
	Cherokee	11	36.6	19	Mitchell	13	47.4	27.3
	Chickasaw	7	22.9	17.8	Montgomery	12	41.7	25.8
	Clay	13	30.3	17.8	O'Brien	17	47.6	29
	Clayton	17	38	26.1	Page	17	43.9	24.7
	Crawford	10	24.5	17.2	Poweshiek	19	39.5	25.9
	Delaware	13	29.6	24.9	Sac	12	45.3	22.7
	Dickinson	14	33.2	15.7	Shelby	17	54.4	36
	Emmet	10	37.9	27.1	Tama	14	31.3	20.7
	Floyd	10	24	14.2	Union	11	35.5	21.6
	Franklin	13	49.5	24.6	Winnebago	8	28.6	22.6
	Hamilton	7	17.8	10.6	Wright	20	60.2	34.5
	Hancock	6	20.7	10.7	<b>Total</b>	478	36.2	22.4
Counties with Average Population > 20,000	Boone	22	33	21.7	Lee	28	31	20.4
	Buchanan	15	28.7	19.7	Mahaska	16	29.1	20.1
	Carroll	18	33.9	20.3	Marion	37	45.3	30.8
	Cerro Gordo	32	28	18.3	Marshall	33	33.6	24.9
	Clinton	45	35.6	25.3	Muscatine	28	26.4	22.4
	Des Moines	34	32.5	22.4	Plymouth	23	37.6	26.5
	Fayette	21	40.4	22.7	Sioux	14	17.3	13
	Henry	18	36.6	24.4	Wapello	22	24.3	15.6
	Jackson	14	27.8	18.3	Webster	30	31.6	24.1
	Jasper	27	29.9	20.1	Winneshiek	12	22.8	16
					<b>Total</b>	489	31.1	21.6
MSA Counties	Benton	13	19.6	15.8	Linn	116	22.5	19.8
	Black Hawk	86	26.2	23	Madison	12	31.7	24.6
	Bremer	24	39.9	25.8	Mills	18	48.6	39.4
	Dallas	36	26.4	27.3	Polk	243	23.2	21.6
	Dubuque	66	28.2	20.6	Pottawattamie	73	32.1	26.2
	Grundy	10	32.5	19.1	Scott	111	26.9	23.5
	Guthrie	8	28.6	18.8	Story	45	22	20.5
	Harrison	9	22.9	15.2	Warren	31	28	24.2
	Johnson	40	12.8	16	Washington	20	36.9	23.9
	Jones	7	14.5	9.3	Woodbury	86	33.2	27
					<b>Total</b>	1,054	25.1	22.1
<b>State Total</b>		2,174	28.9	22.0				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5

# Female Breast Cancer Mortality by County Group 1976-2008



## Colorectal Cancer Incidence 2004-2008

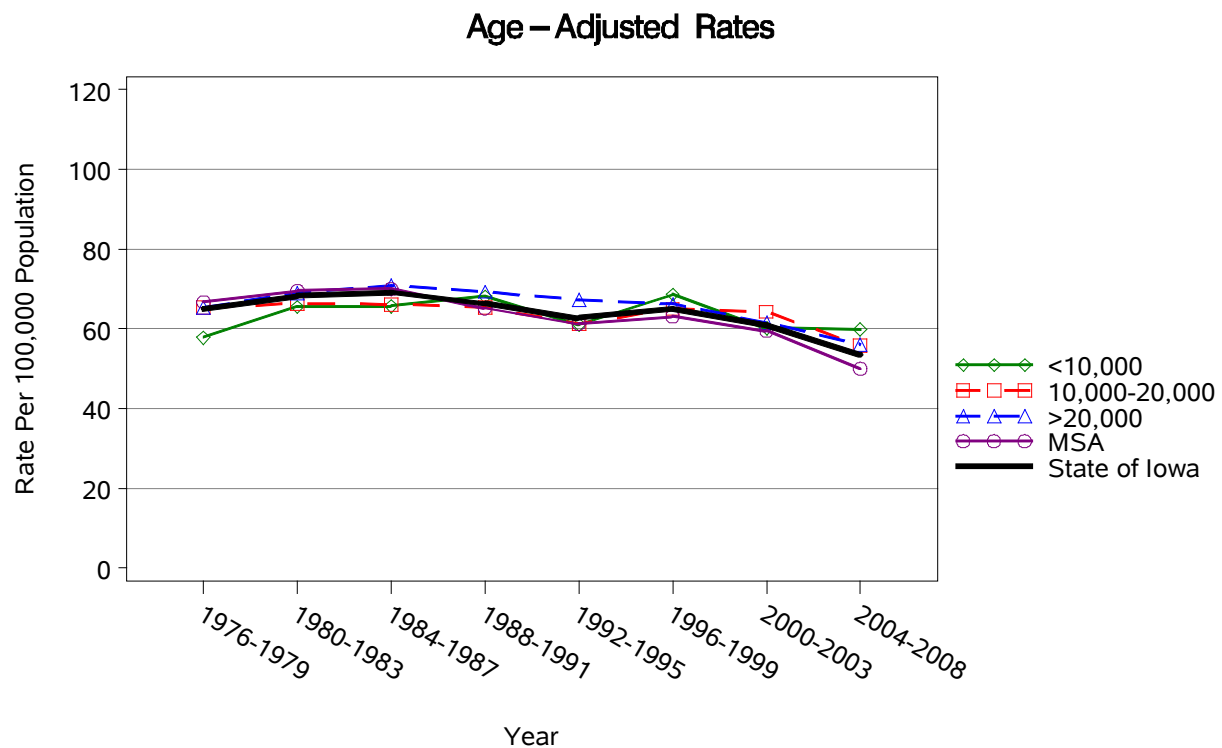
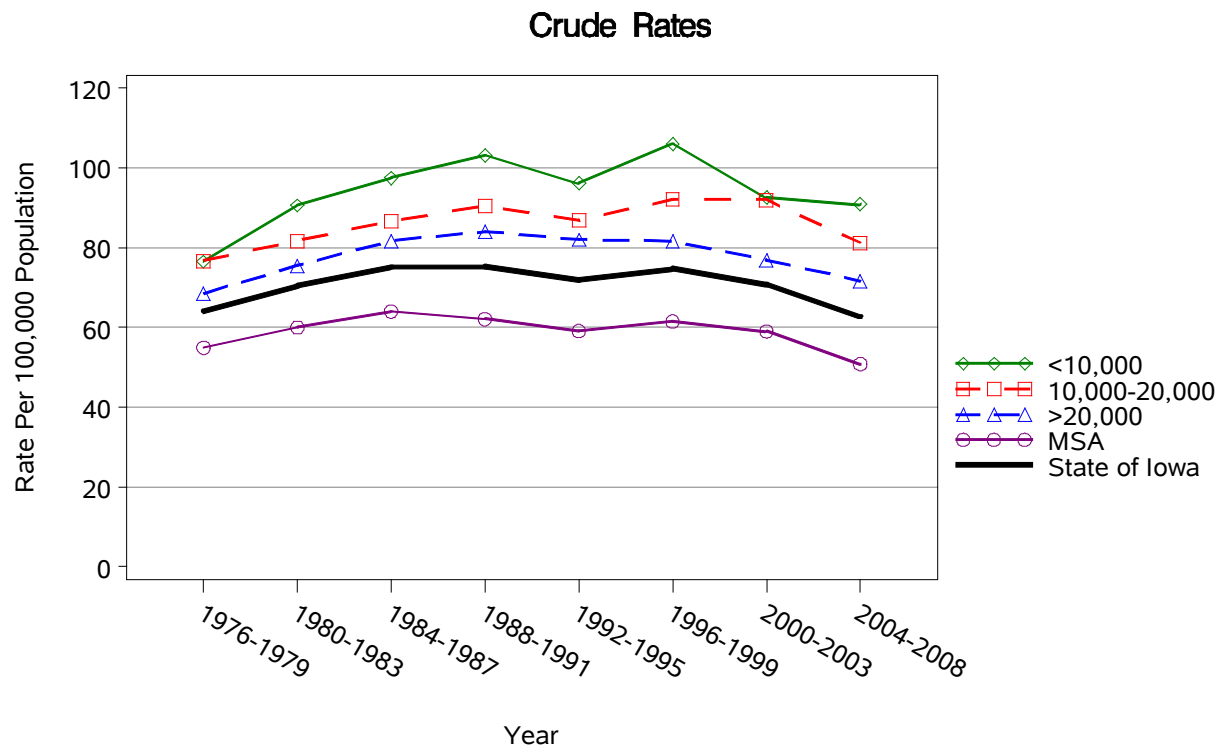
	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	37	96.7 (15)	57.6 (41)	Lucas	44	92.7 (19)	64.2 (17)
	Adams	21	101.5 (11)	65.4 (13)	Monona	47	101.7 (10)	59.0 (37)
	Audubon	32	103.1 (07)	68.7 (10)	Monroe	38	99.2 (13)	63.3 (20)
	Clarke	34	74.8 (53)	56.4 (46)	Osceola	36	109.6 (04)	81.5 (01)
	Davis	32	74.9 (52)	55.7 (51)	Palo Alto	52	109.7 (03)	70.2 (06)
	Decatur	36	86.1 (34)	64.6 (15)	Pocahontas	36	93.5 (17)	54.4 (58)
	Fremont	33	87.5 (31)	60.1 (34)	Ringgold	20	78.1 (45)	47.2 (88)
	Greene	54	112.2 (02)	70.1 (07)	Taylor	24	73.8 (57)	45.3 (91)
	Howard	34	71.3 (67)	48.5 (81)	Van Buren	31	81.0 (40)	60.5 (33)
	Humboldt	37	76.0 (50)	48.9 (78)	Wayne	29	91.0 (22)	53.5 (61)
	Ida	31	87.6 (30)	53.9 (59)	Worth	39	101.9 (09)	72.6 (04)
					<b>Total</b>	<b>777</b>	<b>90.9</b>	<b>59.8</b>
Counties with Average Population 10,000 – 20,000	Allamakee	62	86.0 (35)	62.5 (23)	Hardin	66	74.8 (53)	45.0 (92)
	Appanoose	42	64.1 (78)	43.9 (94)	Iowa	55	69.5 (74)	52.1 (68)
	Buena Vista	72	73.4 (59)	59.3 (36)	Jefferson	43	55.3 (87)	46.6 (89)
	Butler	43	58.6 (84)	38.4 (98)	Keokuk	52	96.2 (16)	67.7 (12)
	Calhoun	53	104.9 (05)	62.6 (22)	Kossuth	56	71.4 (66)	47.3 (87)
	Cass	49	70.4 (71)	45.0 (92)	Louisa	33	55.8 (86)	47.7 (85)
	Cedar	71	78.9 (43)	60.9 (31)	Lyon	47	82.9 (37)	61.0 (30)
	Cherokee	52	87.8 (29)	51.4 (69)	Mitchell	49	90.6 (23)	60.9 (31)
	Chickasaw	44	71.9 (63)	52.2 (66)	Montgomery	57	103.3 (06)	68.4 (11)
	Clay	60	71.7 (64)	50.9 (70)	O'Brien	66	93.3 (18)	61.7 (28)
	Clayton	71	79.9 (42)	56.0 (49)	Page	94	118.3 (01)	77.8 (02)
	Crawford	64	77.4 (46)	58.8 (38)	Poweshiek	82	88.0 (27)	62.9 (21)
	Delaware	68	77.4 (46)	62.3 (25)	Sac	45	86.2 (33)	50.8 (71)
	Dickinson	76	91.6 (20)	55.5 (53)	Shelby	51	82.6 (38)	48.6 (79)
	Emmet	51	98.0 (14)	73.7 (03)	Tama	91	102.4 (08)	69.3 (09)
	Floyd	72	88.5 (26)	62.5 (23)	Union	46	76.6 (49)	53.2 (62)
	Franklin	47	88.6 (25)	55.7 (51)	Winnebago	36	65.7 (77)	50.4 (74)
	Hamilton	55	70.0 (73)	52.5 (63)	Wright	57	86.3 (32)	52.2 (66)
	Hancock	43	75.0 (51)	52.5 (63)	<b>Total</b>	<b>2,086</b>	<b>81.2</b>	<b>55.8</b>
Counties with Average Population > 20,000	Boone	93	70.8 (69)	58.1 (40)	Lee	146	81.2 (39)	61.9 (26)
	Buchanan	64	61.2 (81)	49.7 (75)	Mahaska	93	84.1 (36)	69.5 (08)
	Carroll	105	100.9 (12)	70.5 (05)	Marion	115	70.6 (70)	56.4 (46)
	Cerro Gordo	178	80.7 (41)	58.3 (39)	Marshall	139	71.1 (68)	53.9 (59)
	Clinton	176	71.5 (65)	56.1 (48)	Muscatine	104	49.3 (94)	46.4 (90)
	Des Moines	147	72.3 (61)	55.0 (56)	Plymouth	91	74.4 (55)	59.4 (35)
	Fayette	81	78.4 (44)	52.5 (63)	Sioux	118	73.8 (57)	64.8 (14)
	Henry	51	50.7 (91)	41.0 (97)	Wapello	125	70.3 (72)	55.2 (55)
	Jackson	77	77.1 (48)	57.0 (45)	Webster	117	60.7 (83)	47.6 (86)
	Jasper	134	72.8 (60)	57.3 (42)	Winneshiek	75	72.1 (62)	55.5 (53)
					<b>Total</b>	<b>2,229</b>	<b>71.6</b>	<b>56.1</b>
MSA Counties	Benton	77	57.9 (85)	48.1 (84)	Linn	511	50.4 (92)	48.4 (82)
	Black Hawk	346	54.6 (88)	48.6 (79)	Madison	31	41.0 (97)	37.0 (99)
	Bremer	81	69.0 (75)	54.8 (57)	Mills	50	66.7 (76)	61.5 (29)
	Dallas	134	49.1 (95)	64.0 (19)	Polk	946	46.3 (96)	49.5 (76)
	Dubuque	230	50.2 (93)	42.0 (96)	Pottawattamie	280	62.7 (80)	55.9 (50)
	Grundy	54	88.7 (24)	64.1 (18)	Scott	418	51.8 (90)	50.5 (73)
	Guthrie	51	91.6 (20)	61.8 (27)	Story	169	40.4 (98)	48.3 (83)
	Harrison	68	88.0 (27)	64.3 (16)	Warren	133	61.0 (82)	57.3 (42)
	Johnson	192	31.1 (99)	42.7 (95)	Washington	78	73.9 (56)	57.2 (44)
	Jones	64	62.9 (79)	49.5 (76)	Woodbury	271	53.3 (89)	50.8 (71)
					<b>Total</b>	<b>4,184</b>	<b>50.8</b>	<b>50</b>
	<b>State Total</b>	<b>9,311</b>	<b>62.8</b>	<b>53.5</b>				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program



# Colorectal Cancer Incidence by County Group 1976-2008



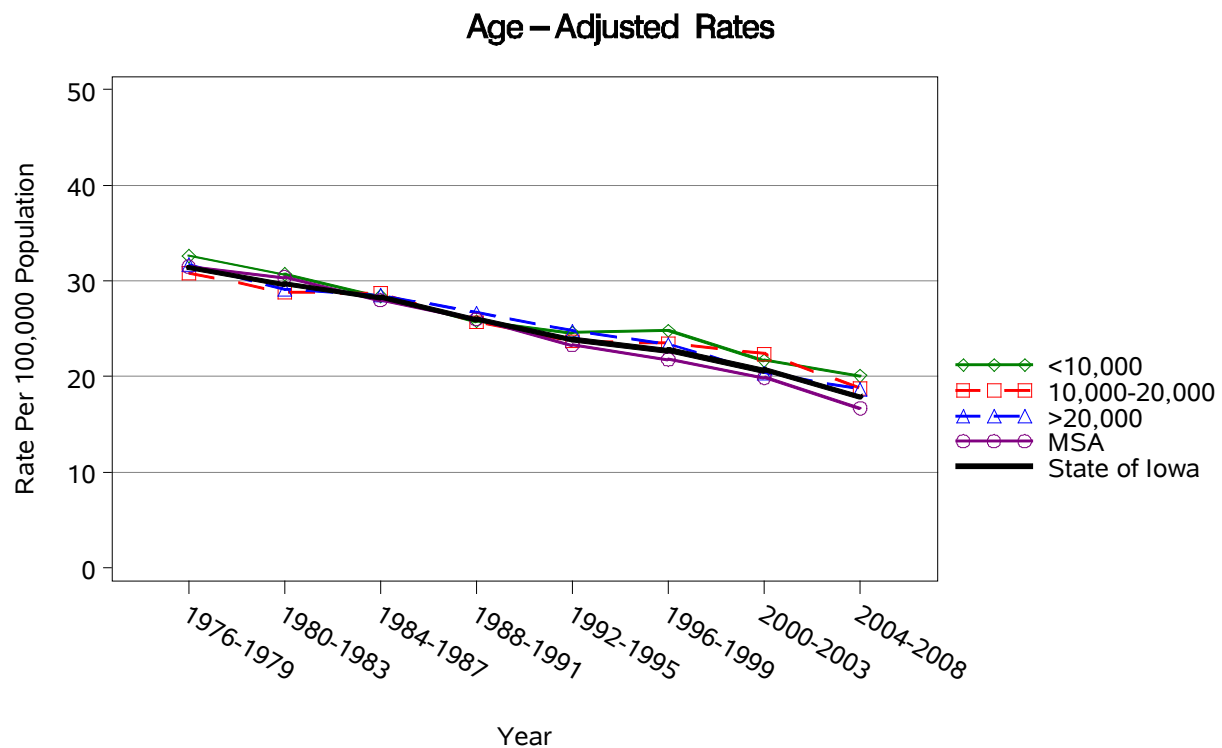
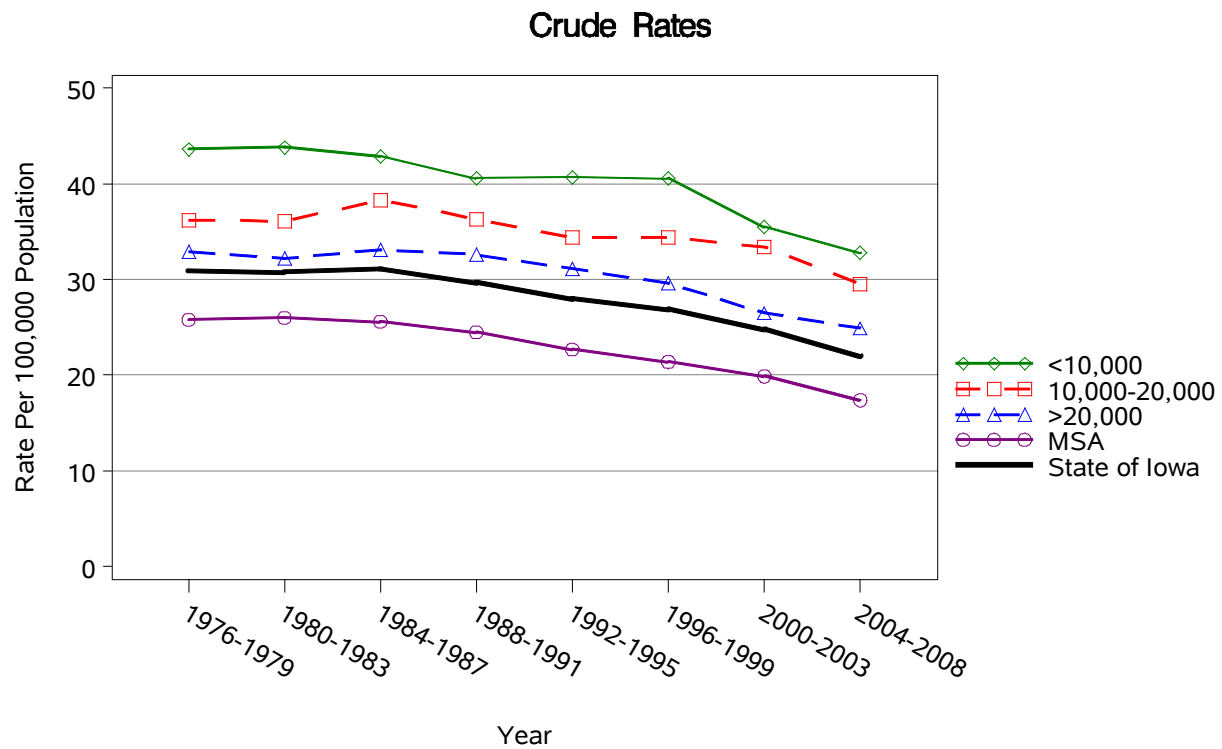
## Colorectal Cancer Mortality 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	14	36.6 (13)	21.3 (29)	Lucas	12	25.3 (58)	15.4 (74)
	Adams	5	24.2 (61)	13.9 (82)	Monona	21	45.4 (05)	25.2 (06)
	Audubon	14	45.1 (06)	25.5 (05)	Monroe	12	31.3 (32)	19.0 (37)
	Clarke	13	28.6 (42)	24.2 (11)	Osceola	6	18.3 (85)	11.0 (98)
	Davis	8	18.7 (81)	13.6 (83)	Palo Alto	15	31.7 (28)	17.3 (59)
	Decatur	14	33.5 (21)	24.7 (07)	Pocahontas	15	39.0 (09)	18.8 (40)
	Fremont	8	21.2 (74)	12.6 (92)	Ringgold	9	35.1 (16)	22.3 (24)
	Greene	15	31.2 (33)	16.7 (61)	Taylor	12	36.9 (12)	24.0 (14)
	Howard	17	35.6 (14)	23.0 (19)	Van Buren	10	26.1 (54)	16.4 (63)
	Humboldt	16	32.9 (25)	18.9 (39)	Wayne	15	47.1 (02)	29.0 (03)
	Ida	11	31.1 (34)	18.2 (50)	Worth	18	47.0 (03)	32.3 (01)
					<b>Total</b>	280	32.8	20.1
Counties with Average Population 10,000 – 20,000	Allamakee	24	33.3 (23)	22.8 (21)	Hardin	26	29.4 (39)	16.0 (68)
	Appanoose	19	29.0 (40)	17.4 (57)	Iowa	24	30.3 (35)	20.0 (34)
	Buena Vista	31	31.6 (29)	22.4 (22)	Jefferson	12	15.4 (96)	12.9 (90)
	Butler	23	31.4 (30)	18.3 (48)	Keokuk	11	20.3 (75)	12.8 (91)
	Calhoun	18	35.6 (14)	18.1 (53)	Kossuth	19	24.2 (61)	14.9 (80)
	Cass	19	27.3 (46)	15.9 (70)	Louisa	13	22.0 (70)	18.8 (40)
	Cedar	16	17.8 (89)	13.3 (86)	Lyon	15	26.5 (50)	18.6 (44)
	Cherokee	20	33.8 (20)	18.7 (42)	Mitchell	17	31.4 (30)	21.7 (27)
	Chickasaw	17	27.8 (44)	21.3 (29)	Montgomery	15	27.2 (47)	16.3 (66)
	Clay	18	21.5 (72)	13.0 (88)	O'Brien	24	33.9 (19)	20.5 (32)
	Clayton	20	22.5 (66)	15.2 (76)	Page	24	30.2 (36)	17.4 (57)
	Crawford	25	30.2 (36)	23.1 (18)	Poweshiek	37	39.7 (08)	28.5 (04)
	Delaware	30	34.2 (18)	24.7 (07)	Sac	24	46.0 (04)	22.3 (24)
	Dickinson	27	32.6 (26)	18.6 (44)	Shelby	26	42.1 (07)	24.2 (11)
	Emmet	18	34.6 (17)	23.4 (16)	Tama	42	47.3 (01)	29.8 (02)
	Floyd	15	18.4 (84)	10.4 (99)	Union	23	38.3 (11)	24.4 (09)
	Franklin	12	22.6 (64)	13.5 (85)	Winnebago	10	18.3 (85)	12.0 (96)
	Hamilton	22	28.0 (43)	19.5 (36)	Wright	22	33.3 (23)	18.2 (50)
	Hancock	15	26.2 (53)	16.0 (68)	<b>Total</b>	773	29.5	18.8
Counties with Average Population > 20,000	Boone	30	22.9 (63)	18.1 (53)	Lee	60	33.4 (22)	24.3 (10)
	Buchanan	29	27.8 (44)	23.4 (16)	Mahaska	22	19.9 (77)	16.4 (63)
	Carroll	40	38.4 (10)	23.9 (15)	Marion	52	31.9 (27)	24.1 (13)
	Cerro Gordo	43	19.5 (78)	13.3 (86)	Marshall	59	30.2 (36)	22.4 (22)
	Clinton	65	26.4 (52)	20.2 (33)	Muscatine	47	22.3 (68)	21.2 (31)
	Des Moines	46	22.6 (64)	15.8 (71)	Plymouth	26	21.3 (73)	15.5 (73)
	Fayette	30	29.0 (40)	18.2 (50)	Sioux	29	18.1 (87)	15.1 (78)
	Henry	26	25.9 (55)	21.5 (28)	Wapello	40	22.5 (66)	16.7 (61)
	Jackson	27	27.1 (48)	18.7 (42)	Webster	34	17.6 (90)	13.0 (88)
	Jasper	47	25.5 (57)	19.9 (35)	Winneshiek	23	22.1 (69)	15.6 (72)
					<b>Total</b>	775	24.9	18.7
MSA Counties	Benton	21	15.8 (95)	12.2 (94)	Linn	164	16.2 (93)	15.2 (76)
	Black Hawk	117	18.5 (83)	15.4 (74)	Madison	12	15.9 (94)	14.0 (81)
	Bremer	22	18.7 (81)	13.6 (83)	Mills	9	12.0 (97)	11.5 (97)
	Dallas	49	17.9 (88)	23.0 (19)	Polk	359	17.6 (90)	18.4 (47)
	Dubuque	88	19.2 (80)	15.0 (79)	Pottawattamie	112	25.1 (59)	22.2 (26)
	Grundy	15	24.6 (60)	17.1 (60)	Scott	136	16.8 (92)	16.3 (66)
	Guthrie	15	26.9 (49)	17.7 (56)	Story	43	10.3 (98)	12.2 (94)
	Harrison	20	25.9 (55)	18.6 (44)	Warren	44	20.2 (76)	19.0 (37)
	Johnson	56	9.1 (99)	12.4 (93)	Washington	28	26.5 (50)	18.3 (48)
	Jones	22	21.6 (71)	16.4 (63)	Woodbury	98	19.3 (79)	18.0 (55)
					<b>Total</b>	1,430	17.4	16.7
<b>State Total</b>		3,258	22.0	17.9				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Colorectal Cancer Mortality by County Group 1976-2008



# Non-Hodgkin's Lymphoma Incidence 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	5	13.1 (98)	10.7 (96)	Lucas	7	14.7 (95)	10.0 (97)
	Adams	9	43.5 (07)	26.4 (23)	Monona	20	43.3 (08)	24.5 (33)
	Audubon	14	45.1 (06)	29.6 (08)	Monroe	15	39.2 (14)	29.3 (11)
	Clarke	11	24.2 (63)	18.9 (72)	Osceola	10	30.4 (36)	22.9 (38)
	Davis	13	30.4 (36)	25.0 (29)	Palo Alto	16	33.8 (27)	20.8 (55)
	Decatur	15	35.9 (20)	28.6 (14)	Pocahontas	22	57.2 (01)	33.2 (04)
	Fremont	8	21.2 (78)	16.3 (82)	Ringgold	8	31.2 (32)	18.7 (73)
	Greene	17	35.3 (22)	25.3 (26)	Taylor	18	55.4 (02)	36.1 (02)
	Howard	19	39.8 (12)	27.6 (17)	Van Buren	6	15.7 (94)	9.9 (98)
	Humboldt	13	26.7 (54)	18.7 (73)	Wayne	17	53.4 (03)	36.1 (02)
	Ida	8	22.6 (73)	16.0 (83)	Worth	5	13.1 (98)	9.7 (99)
					<b>Total</b>	276	32.3	22.2
Counties with Average Population 10,000 – 20,000	Allamakee	26	36.1 (19)	28.1 (16)	Hardin	25	28.3 (45)	19.9 (64)
	Appanoose	26	39.7 (13)	30.4 (07)	Iowa	41	51.8 (04)	40.4 (01)
	Buena Vista	23	23.5 (68)	19.1 (69)	Jefferson	11	14.2 (97)	12.2 (94)
	Butler	31	42.3 (11)	28.2 (15)	Keokuk	16	29.6 (40)	21.2 (50)
	Calhoun	12	23.7 (67)	13.9 (90)	Kossuth	23	29.3 (41)	21.7 (48)
	Cass	20	28.7 (42)	19.1 (69)	Louisa	12	20.3 (82)	18.0 (76)
	Cedar	33	36.7 (17)	29.4 (10)	Lyon	11	19.4 (85)	15.8 (84)
	Cherokee	19	32.1 (30)	20.4 (60)	Mitchell	17	31.4 (31)	17.9 (77)
	Chickasaw	22	35.9 (20)	26.6 (21)	Montgomery	18	32.6 (29)	25.9 (24)
	Clay	26	31.1 (33)	23.0 (37)	O'Brien	33	46.7 (05)	32.3 (05)
	Clayton	25	28.1 (47)	22.0 (46)	Page	34	42.8 (10)	27.4 (19)
	Crawford	14	16.9 (93)	14.5 (89)	Poweshiek	16	17.2 (90)	13.8 (91)
	Delaware	24	27.3 (52)	22.9 (38)	Sac	12	23.0 (71)	19.8 (65)
	Dickinson	31	37.4 (16)	22.9 (38)	Shelby	15	24.3 (62)	17.9 (77)
	Emmet	14	26.9 (53)	20.4 (60)	Tama	25	28.1 (47)	20.9 (54)
	Floyd	25	30.7 (35)	23.1 (36)	Union	17	28.3 (45)	20.7 (57)
	Franklin	23	43.3 (08)	32.2 (06)	Winnebago	14	25.6 (57)	16.9 (79)
	Hamilton	18	22.9 (72)	15.1 (87)	Wright	14	21.2 (78)	13.7 (92)
	Hancock	16	27.9 (50)	22.2 (44)	<b>Total</b>	772	30.1	22
Counties with Average Population > 20,000	Boone	23	17.5 (88)	15.0 (88)	Lee	48	26.7 (54)	21.1 (51)
	Buchanan	30	28.7 (42)	24.8 (30)	Mahaska	21	19.0 (86)	15.8 (84)
	Carroll	31	29.8 (39)	22.1 (45)	Marion	39	24.0 (65)	20.5 (59)
	Cerro Gordo	77	34.9 (24)	25.6 (25)	Marshall	55	28.1 (47)	23.5 (35)
	Clinton	55	22.3 (75)	18.2 (75)	Muscatine	43	20.4 (81)	19.0 (71)
	Des Moines	74	36.4 (18)	27.5 (18)	Plymouth	43	35.2 (23)	29.5 (09)
	Fayette	39	37.8 (15)	27.4 (19)	Sioux	23	14.4 (96)	11.8 (95)
	Henry	34	33.8 (27)	28.8 (13)	Wapello	55	30.9 (34)	24.6 (32)
	Jackson	30	30.1 (38)	25.1 (28)	Webster	40	20.7 (80)	16.9 (79)
	Jasper	45	24.5 (60)	19.7 (66)	Winneshiek	21	20.2 (83)	15.5 (86)
					<b>Total</b>	826	26.5	21.6
MSA Counties	Benton	30	22.6 (73)	20.0 (63)	Linn	236	23.3 (70)	22.4 (43)
	Black Hawk	153	24.1 (64)	22.0 (46)	Madison	18	23.8 (66)	19.5 (67)
	Bremer	30	25.5 (58)	20.6 (58)	Mills	13	17.3 (89)	16.5 (81)
	Dallas	67	24.5 (60)	29.0 (12)	Polk	409	20.0 (84)	21.0 (52)
	Dubuque	119	26.0 (56)	22.6 (42)	Pottawattamie	105	23.5 (68)	21.3 (49)
	Grundy	11	18.1 (87)	12.8 (93)	Scott	206	25.5 (58)	24.8 (30)
	Guthrie	16	28.7 (42)	19.2 (68)	Story	71	17.0 (91)	21.0 (52)
	Harrison	27	34.9 (24)	26.6 (21)	Warren	47	21.6 (76)	20.8 (55)
	Johnson	105	17.0 (91)	23.8 (34)	Washington	36	34.1 (26)	25.3 (26)
	Jones	28	27.5 (51)	22.7 (41)	Woodbury	110	21.6 (76)	20.4 (60)
					<b>Total</b>	1,837	22.3	22
<b>State Total</b>		3,721	25.1	21.9				

<sup>1</sup>Rates per 100,000 population

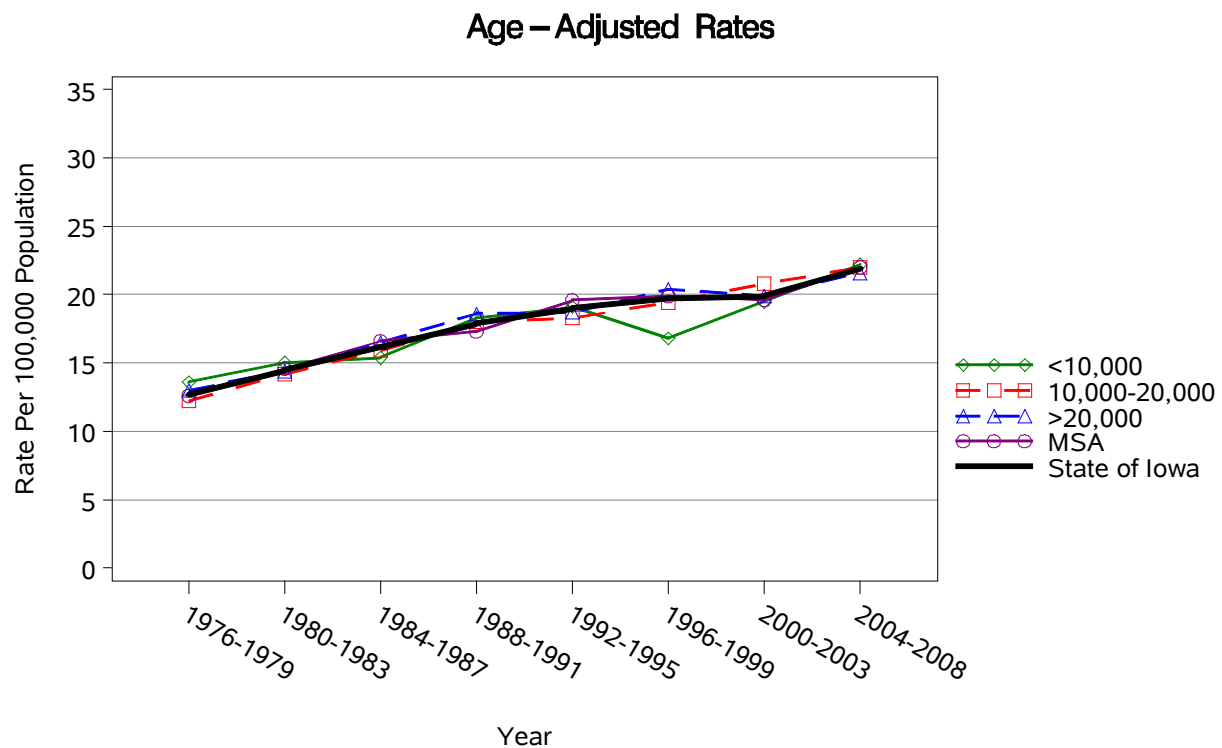
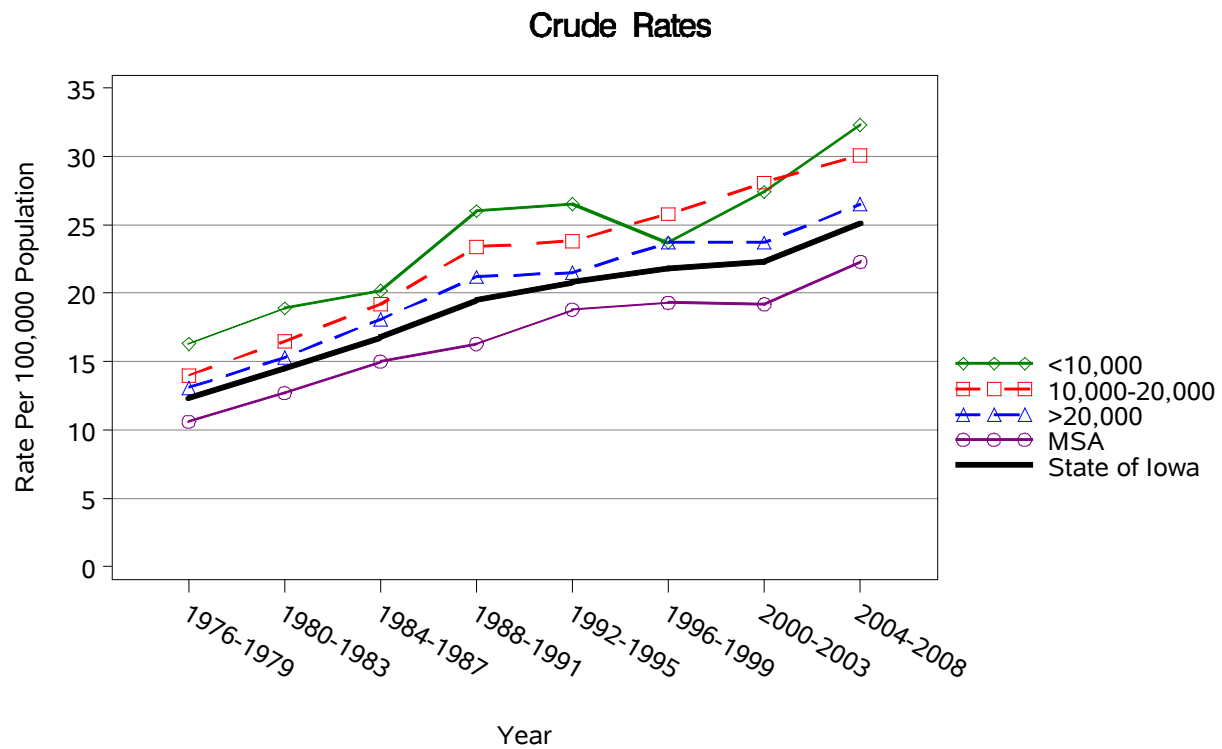
<sup>2</sup>Adjusted to year 2000 population

<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5

# Non-Hodgkin's Lymphoma Incidence by County Group 1976-2008



# Non-Hodgkin's Lymphoma Mortality 2004-2008

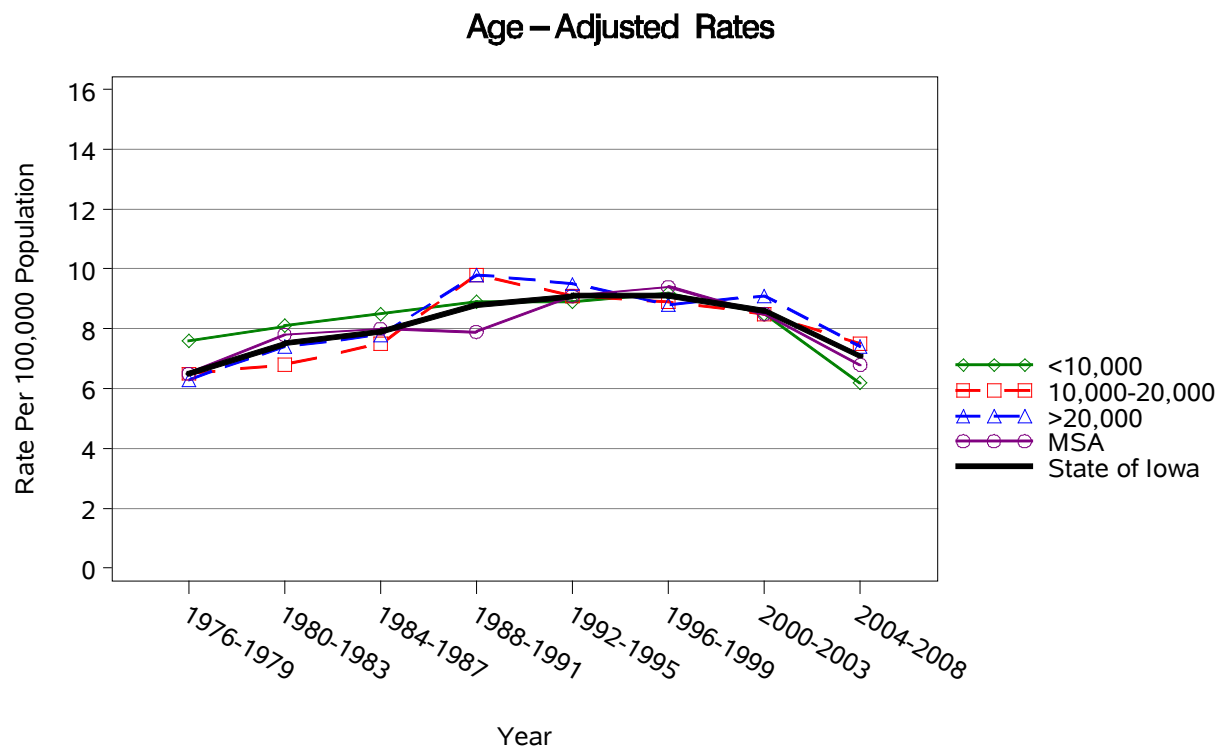
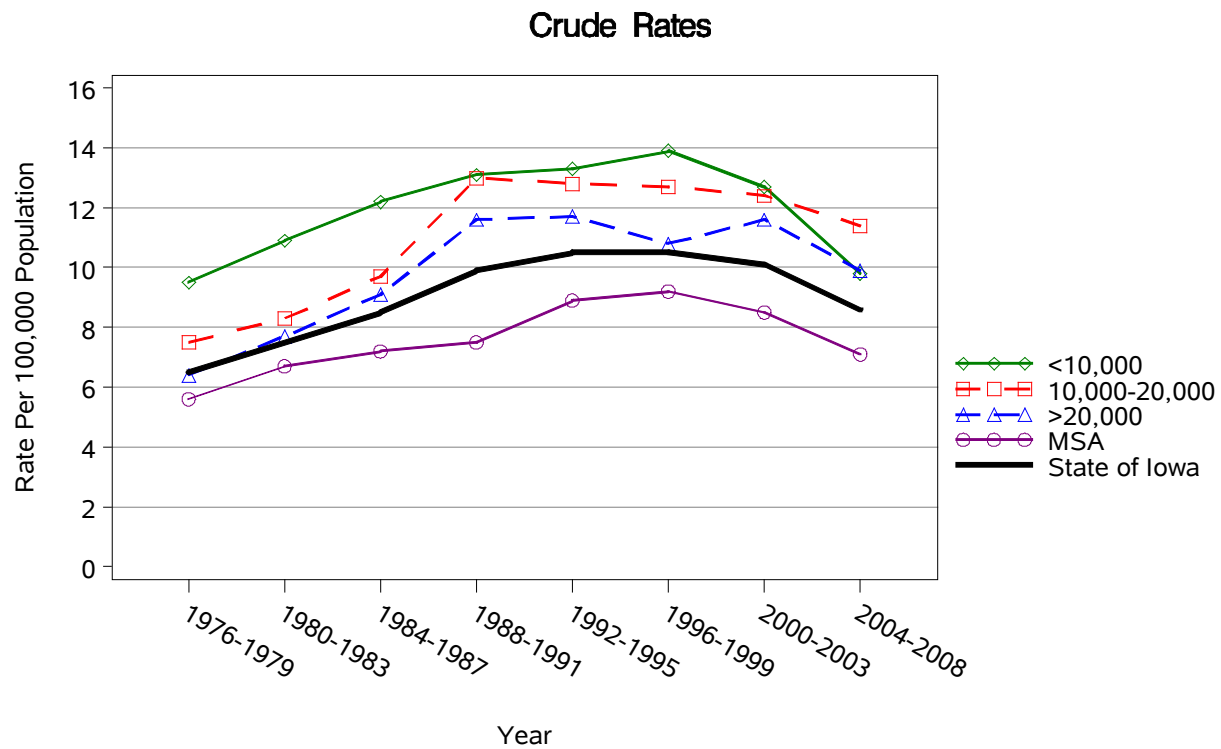
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	7	18.3	11.2	Lucas	*	*	*
	Adams	*	*	*	Monona	10	21.6	12.4
	Audubon	7	22.5	13.4	Monroe	*	*	*
	Clarke	*	*	*	Osceola	5	15.2	11.6
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	5	12	8.1	Pocahontas	6	15.6	7.5
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	5	15.4	8.9
	Howard	9	18.9	12.2	Van Buren	5	13.1	8.8
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	<b>84</b>	<b>9.8</b>	<b>6.2</b>
Counties with Average Population 10,000 – 20,000	Allamakee	6	8.3	5.5	Hardin	11	12.5	7.6
	Appanoose	5	7.6	5.2	Iowa	15	18.9	12.3
	Buena Vista	15	15.3	11.9	Jefferson	8	10.3	8.2
	Butler	9	12.3	8	Keokuk	*	*	*
	Calhoun	5	9.9	5.9	Kossuth	7	8.9	5.4
	Cass	11	15.8	11.3	Louisa	5	8.5	7.1
	Cedar	8	8.9	6.2	Lyon	*	*	*
	Cherokee	9	15.2	9	Mitchell	*	*	*
	Chickasaw	10	16.3	12.3	Montgomery	6	10.9	6.5
	Clay	10	12	8.9	O'Brien	15	21.2	14.2
	Clayton	8	9	5.1	Page	12	15.1	7.9
	Crawford	*	*	*	Poweshiek	8	8.6	6.1
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	17	20.5	12	Shelby	*	*	*
	Emmet	*	*	*	Tama	10	11.3	7.5
	Floyd	15	18.4	13	Union	*	*	*
	Franklin	*	*	*	Winnebago	8	14.6	8.4
	Hamilton	13	16.6	10.3	Wright	8	12.1	6.1
	Hancock	9	15.7	10.4	<b>Total</b>	<b>298</b>	<b>11.4</b>	<b>7.5</b>
Counties with Average Population > 20,000	Boone	14	10.7	7.9	Lee	18	10	7.4
	Buchanan	13	12.4	10.4	Mahaska	6	5.4	4
	Carroll	16	15.4	10.7	Marion	11	6.8	5
	Cerro Gordo	26	11.8	7.9	Marshall	18	9.2	7
	Clinton	16	6.5	4.7	Muscatine	17	8.1	7.4
	Des Moines	21	10.3	7.9	Plymouth	17	13.9	10.7
	Fayette	17	16.5	11.5	Sioux	13	8.1	6.2
	Henry	13	12.9	11.2	Wapello	17	9.6	6.9
	Jackson	11	11	8.4	Webster	18	9.3	7
	Jasper	20	10.9	8.2	Winneshiek	7	6.7	4.5
					<b>Total</b>	<b>309</b>	<b>9.9</b>	<b>7.4</b>
MSA Counties	Benton	10	7.5	6.3	Linn	76	7.5	6.9
	Black Hawk	57	9	7.7	Madison	5	6.6	5.4
	Bremer	8	6.8	5.2	Mills	7	9.3	9.4
	Dallas	14	5.1	6.7	Polk	107	5.2	5.5
	Dubuque	40	8.7	7	Pottawattamie	36	8.1	7
	Grundy	8	13.1	8.3	Scott	68	8.4	8.3
	Guthrie	*	*	*	Story	29	6.9	7.5
	Harrison	7	9.1	6.9	Warren	20	9.2	8.2
	Johnson	29	4.7	6.9	Washington	11	10.4	7.4
	Jones	10	9.8	7.7	Woodbury	40	7.9	7.4
					<b>Total</b>	<b>586</b>	<b>7.1</b>	<b>6.8</b>
	<b>State Total</b>	<b>1,277</b>	<b>8.6</b>	<b>7.1</b>				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5

# Non-Hodgkin's Lymphoma Mortality by County Group 1976-2008



## Skin Melanoma Incidence 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	13	34.0 (11)	28.0 (15)	Lucas	11	23.2 (48)	17.5 (71)
	Adams	6	29.0 (23)	22.7 (30)	Monona	13	28.1 (26)	22.1 (32)
	Audubon	7	22.5 (53)	17.1 (72)	Monroe	10	26.1 (33)	22.0 (33)
	Clarke	9	19.8 (70)	18.2 (64)	Osceola	6	18.3 (81)	17.9 (69)
	Davis	9	21.1 (63)	18.4 (61)	Palo Alto	17	35.9 (09)	32.8 (07)
	Decatur	9	21.5 (60)	19.3 (54)	Pocahontas	5	13.0 (96)	8.4 (98)
	Fremont	9	23.9 (45)	18.8 (58)	Ringgold	*	*	*
	Greene	25	52.0 (02)	37.4 (02)	Taylor	8	24.6 (39)	16.1 (81)
	Howard	21	44.0 (03)	36.4 (03)	Van Buren	4	10.4 (99)	9.1 (96)
	Humboldt	8	16.4 (86)	13.0 (91)	Wayne	7	22.0 (56)	19.6 (50)
	Ida	14	39.6 (05)	33.1 (06)	Worth	10	26.1 (33)	21.7 (34)
					<b>Total</b>	221-226	25.8-26.4	21.4
Counties with Average Population 10,000 – 20,000	Allamakee	10	13.9 (93)	11.8 (94)	Hardin	26	29.4 (22)	26.6 (17)
	Appanoose	15	22.9 (50)	18.2 (64)	Iowa	21	26.5 (31)	24.4 (23)
	Buena Vista	20	20.4 (66)	18.2 (64)	Jefferson	17	21.9 (57)	20.7 (45)
	Butler	19	25.9 (35)	21.5 (35)	Keokuk	15	27.7 (27)	25.2 (21)
	Calhoun	10	19.8 (70)	14.1 (89)	Kossuth	30	38.2 (06)	34.2 (05)
	Cass	17	24.4 (41)	20.8 (43)	Louisa	19	32.2 (14)	29.2 (11)
	Cedar	24	26.7 (30)	23.7 (24)	Lyon	11	19.4 (74)	14.5 (87)
	Cherokee	17	28.7 (24)	18.4 (61)	Mitchell	16	29.6 (21)	20.9 (41)
	Chickasaw	20	32.7 (12)	27.0 (16)	Montgomery	18	32.6 (13)	28.1 (14)
	Clay	18	21.5 (60)	18.0 (68)	O'Brien	19	26.9 (28)	23.0 (27)
	Clayton	23	25.9 (35)	21.2 (39)	Page	24	30.2 (19)	22.5 (31)
	Crawford	9	10.9 (98)	8.2 (99)	Poweshiek	17	18.2 (83)	13.9 (90)
	Delaware	18	20.5 (65)	17.0 (73)	Sac	10	19.2 (76)	15.7 (83)
	Dickinson	25	30.1 (20)	21.0 (40)	Shelby	15	24.3 (42)	18.8 (58)
	Emmet	8	15.4 (90)	15.4 (85)	Tama	17	19.1 (77)	16.5 (77)
	Floyd	30	36.9 (07)	28.5 (12)	Union	11	18.3 (81)	16.1 (81)
	Franklin	19	35.8 (10)	31.0 (09)	Winnebago	24	43.8 (04)	36.2 (04)
	Hamilton	17	21.6 (58)	19.4 (52)	Wright	21	31.8 (16)	25.8 (20)
	Hancock	21	36.6 (08)	28.4 (13)	<b>Total</b>	659	25.7	21.1
Counties with Average Population > 20,000	Boone	31	23.6 (47)	19.4 (52)	Lee	35	19.5 (73)	16.2 (80)
	Buchanan	17	16.3 (87)	16.5 (77)	Mahaska	22	19.9 (68)	18.1 (67)
	Carroll	24	23.1 (49)	20.8 (43)	Marion	40	24.6 (39)	23.2 (26)
	Cerro Gordo	67	30.4 (18)	25.1 (22)	Marshall	44	22.5 (53)	18.4 (61)
	Clinton	63	25.6 (37)	22.8 (28)	Muscatine	42	19.9 (68)	19.2 (55)
	Des Moines	28	13.8 (94)	11.9 (93)	Plymouth	39	31.9 (15)	32.8 (07)
	Fayette	20	19.4 (74)	15.5 (84)	Sioux	43	26.9 (28)	26.4 (18)
	Henry	19	18.9 (79)	18.9 (57)	Wapello	38	21.4 (62)	19.1 (56)
	Jackson	25	25.0 (38)	21.4 (37)	Webster	46	23.8 (46)	19.6 (50)
	Jasper	42	22.8 (51)	20.0 (49)	Winneshiek	32	30.7 (17)	30.9 (10)
					<b>Total</b>	717	23	20.6
MSA Counties	Benton	30	22.6 (52)	20.6 (46)	Linn	172	17.0 (84)	16.5 (77)
	Black Hawk	137	21.6 (58)	20.9 (41)	Madison	17	22.5 (53)	20.2 (48)
	Bremer	24	20.4 (66)	18.6 (60)	Mills	9	12.0 (97)	11.2 (95)
	Dallas	54	19.8 (70)	21.4 (37)	Polk	294	14.4 (92)	14.9 (86)
	Dubuque	111	24.2 (44)	22.8 (28)	Pottawattamie	70	15.7 (88)	14.5 (87)
	Grundy	33	54.2 (01)	43.6 (01)	Scott	196	24.3 (42)	23.3 (25)
	Guthrie	16	28.7 (24)	21.5 (35)	Story	57	13.6 (95)	16.9 (75)
	Harrison	16	20.7 (64)	17.0 (73)	Warren	41	18.8 (80)	17.8 (70)
	Johnson	102	16.5 (85)	20.3 (47)	Washington	20	19.0 (78)	16.9 (75)
	Jones	15	14.7 (91)	12.8 (92)	Woodbury	134	26.4 (32)	26.0 (19)
	<b>State Total</b>	3,161	21.3	19.7	<b>Total</b>	1,548	18.8	18.7

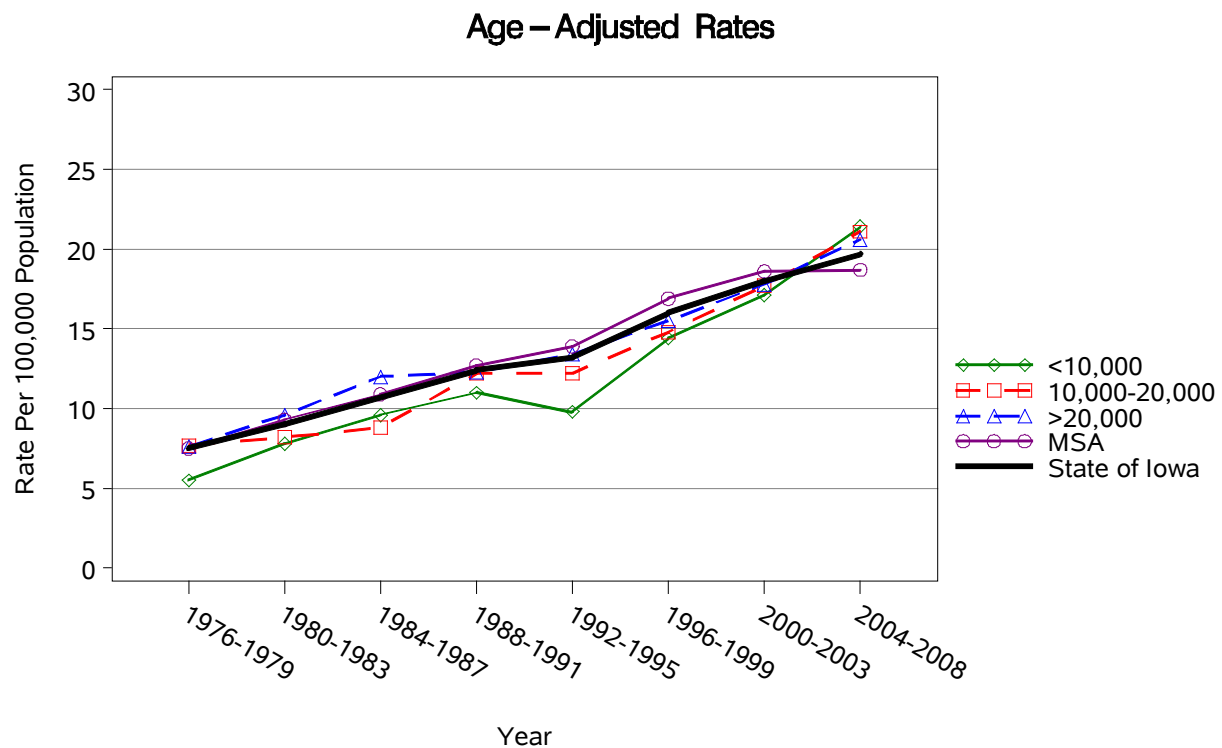
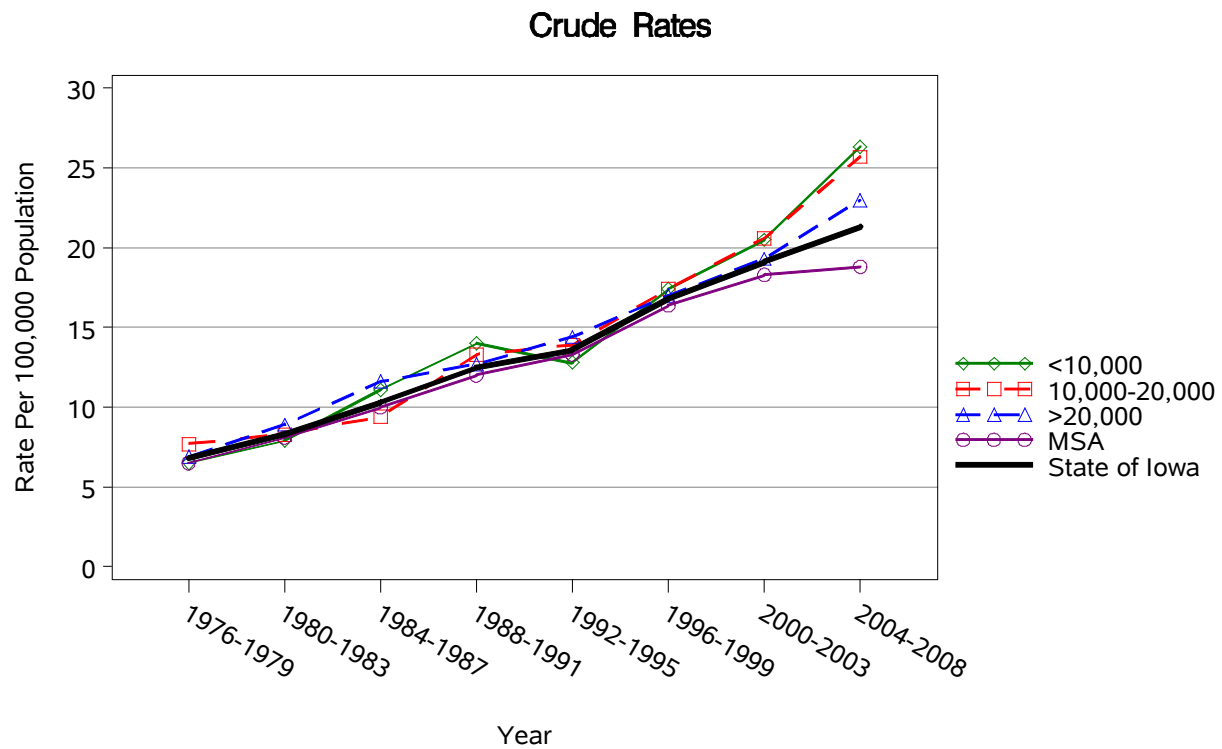
<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5



# Skin Melanoma Incidence by County Group 1976-2008



## Skin Melanoma Mortality 2004-2008

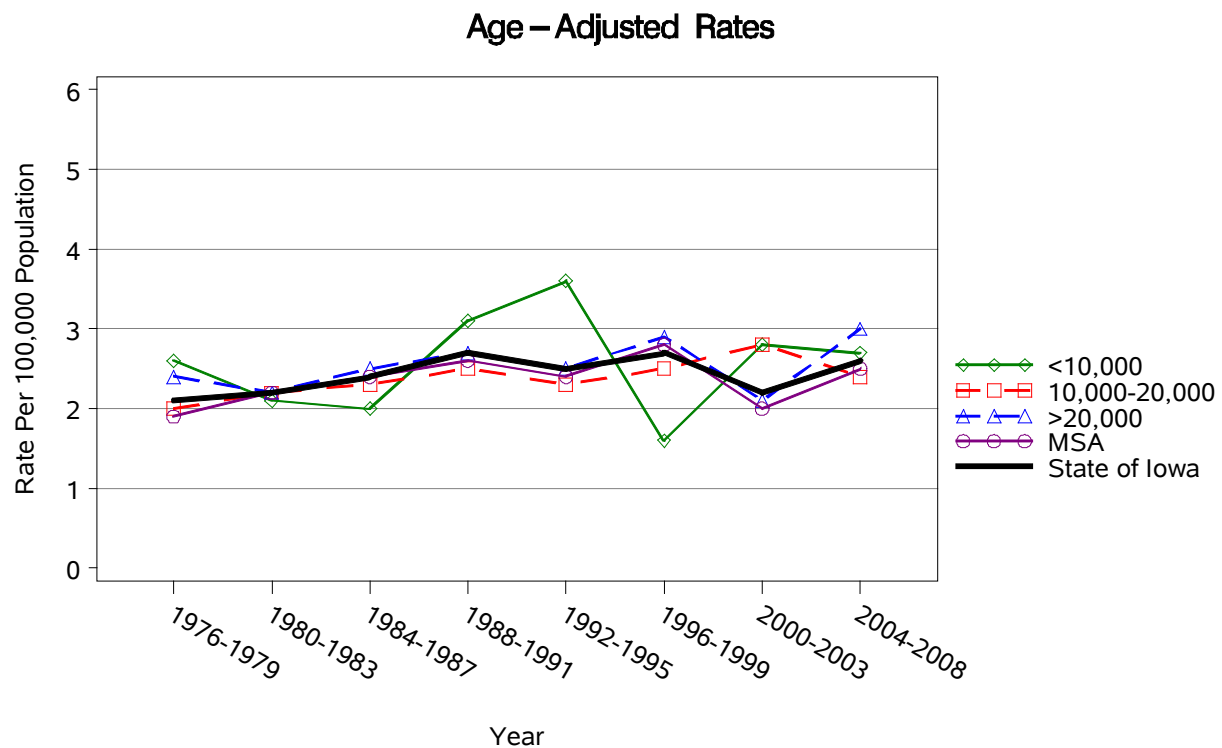
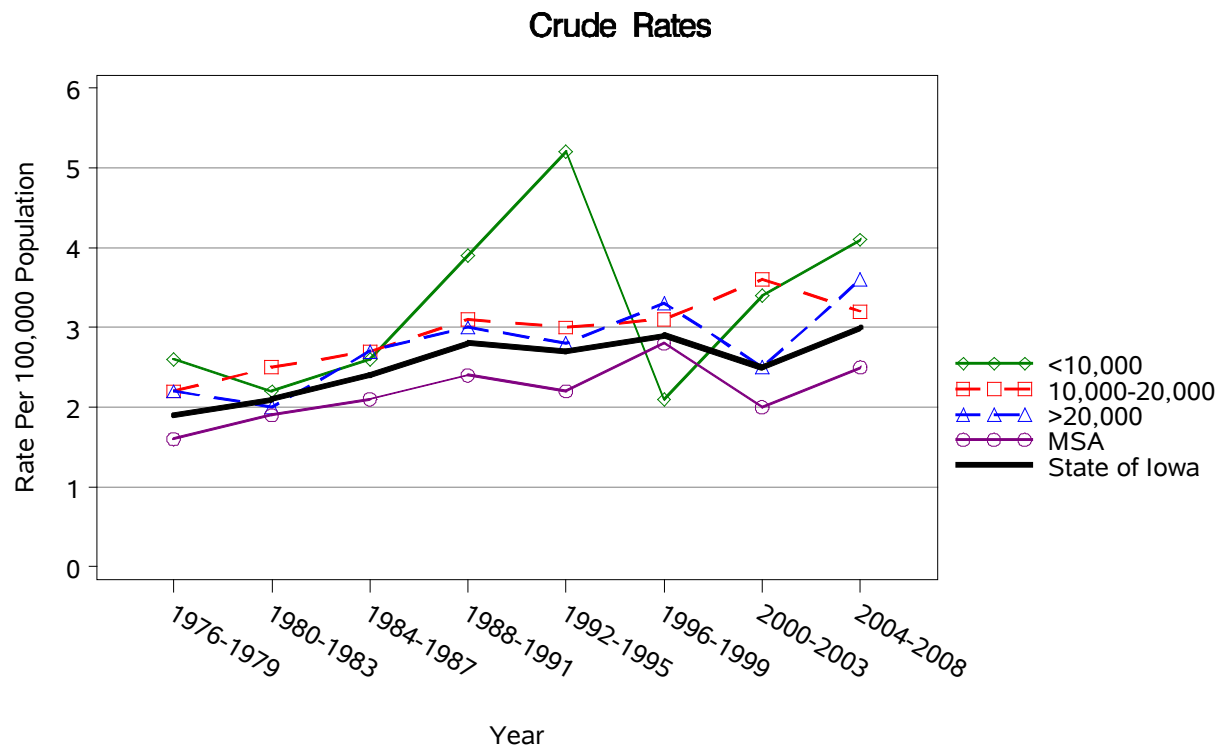
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	35	4.1	2.7
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	5	6.3	6
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	5	5.6	4.3	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	5	6	4.3	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	5	5.7	5.9	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	85	3.2	2.4
Counties with Average Population > 20,000	Boone	6	4.6	4	Lee	11	6.1	4.7
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	5	3.1	2.5
	Cerro Gordo	*	*	*	Marshall	*	*	*
	Clinton	10	4.1	3.4	Muscatine	8	3.8	3.6
	Des Moines	*	*	*	Plymouth	*	*	*
	Fayette	5	4.8	3.7	Sioux	8	5	4.9
	Henry	5	5	4.5	Wapello	9	5.1	4.1
	Jackson	*	*	*	Webster	11	5.7	4.4
	Jasper	10	5.4	4.7	Winneshiek	*	*	*
					<b>Total</b>	117	3.6	3.0
MSA Counties	Benton	*	*	*	Linn	29	2.9	2.7
	Black Hawk	20	3.2	3	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	5	1.8	2.4	Polk	48	2.3	2.5
	Dubuque	9	2	1.5	Pottawattamie	17	3.8	3.2
	Grundy	*	*	*	Scott	27	3.3	3.2
	Guthrie	*	*	*	Story	11	2.6	3.1
	Harrison	*	*	*	Warren	8	3.7	3.7
	Johnson	13	2.1	2.9	Washington	*	*	*
	Jones	*	*	*	Woodbury	8	1.6	1.5
					<b>Total</b>	208	2.5	2.5
	<b>State Total</b>	443	3.0	2.6				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\*Represents a count less than 5

# Skin Melanoma Mortality by County Group 1976-2008



# Leukemia Incidence 2004-2008

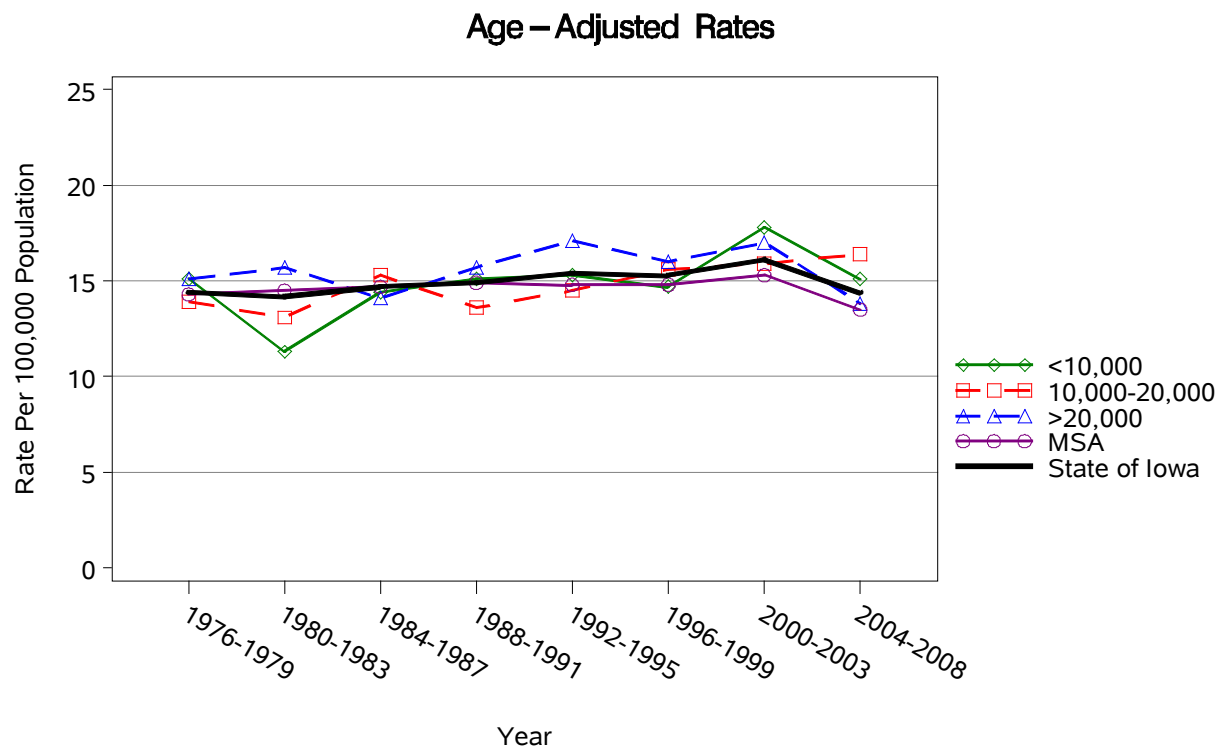
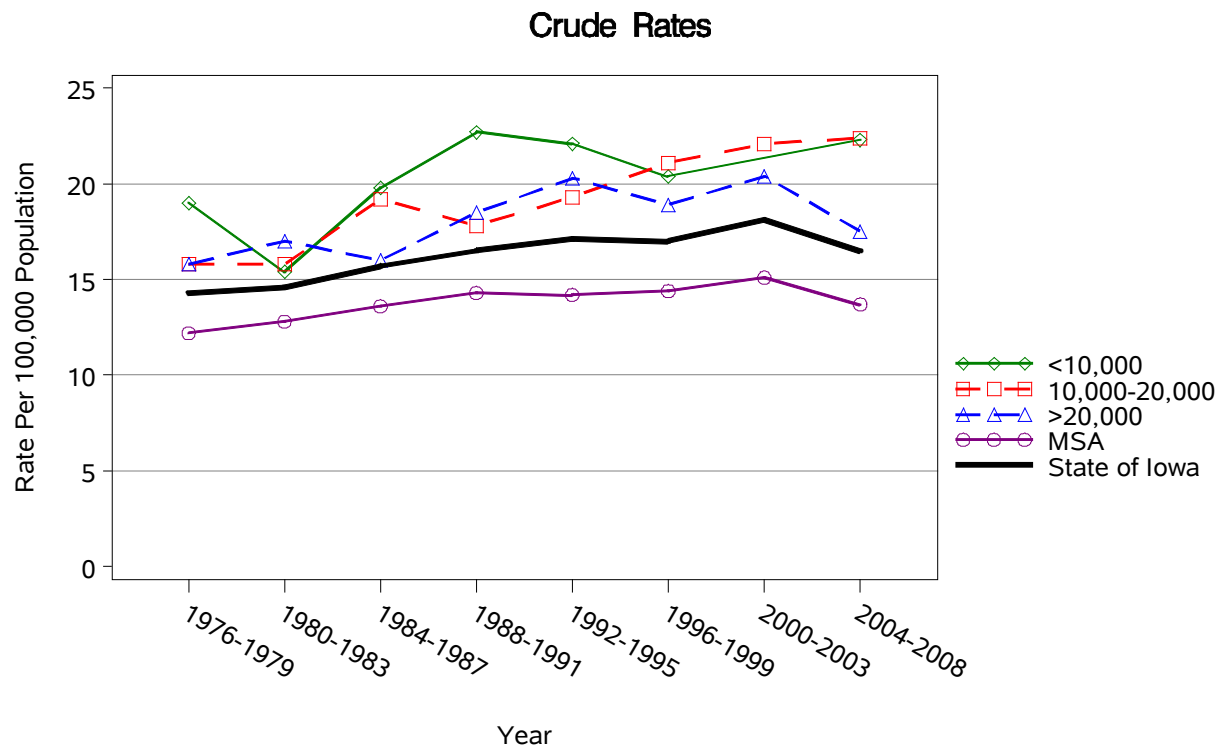
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	9	23.5	16.2	Lucas	9	19	14.2
	Adams	5	24.2	14.5	Monona	12	26	13.5
	Audubon	11	35.4	23.1	Monroe	7	18.3	13.9
	Clarke	10	22	17.4	Osceola	6	18.3	13.2
	Davis	16	37.4	31.1	Palo Alto	8	16.9	9.4
	Decatur	11	26.3	22.1	Pocahontas	6	15.6	9
	Fremont	3	8	4.8	Ringgold	7	27.3	16.9
	Greene	7	14.5	8.9	Taylor	10	30.8	18.5
	Howard	9	18.9	15.4	Van Buren	10	26.1	19.2
	Humboldt	7	14.4	9	Wayne	6	18.8	10
	Ida	16	45.2	25.6	Worth	6	15.7	10.9
					<b>Total</b>	191	22.3	15.1
Counties with Average Population 10,000 – 20,000	Allamakee	15	20.8	15.2	Hardin	21	23.8	14.7
	Appanoose	15	22.9	16.4	Iowa	20	25.3	20.7
	Buena Vista	17	17.3	15.3	Jefferson	17	21.9	19.5
	Butler	21	28.6	19.7	Keokuk	14	25.9	16.3
	Calhoun	11	21.8	10.7	Kossuth	23	29.3	20.7
	Cass	19	27.3	16.7	Louisa	9	15.2	13.8
	Cedar	16	17.8	12.4	Lyon	15	26.5	20.7
	Cherokee	23	38.8	30.6	Mitchell	12	22.2	16.9
	Chickasaw	10	16.3	11.8	Montgomery	7	12.7	8.3
	Clay	9	10.8	8.6	O'Brien	27	38.2	25.7
	Clayton	16	18	13.6	Page	21	26.4	20.7
	Crawford	19	23	19.1	Poweshiek	18	19.3	13.9
	Delaware	14	15.9	12.9	Sac	15	28.7	20.7
	Dickinson	18	21.7	14.7	Shelby	13	21	13.2
	Emmet	9	17.3	11.6	Tama	26	29.3	22
	Floyd	16	19.7	16.6	Union	17	28.3	21.6
	Franklin	10	18.8	12.1	Winnebago	9	16.4	14.1
	Hamilton	17	21.6	17.6	Wright	15	22.7	15
	Hancock	12	20.9	16.5	<b>Total</b>	576	22.4	16.4
Counties with Average Population > 20,000	Boone	18	13.7	10.7	Lee	33	18.4	13.7
	Buchanan	18	17.2	14.9	Mahaska	18	16.3	14.8
	Carroll	11	10.6	7.1	Marion	29	17.8	15.4
	Cerro Gordo	48	21.8	15.6	Marshall	48	24.6	19.5
	Clinton	31	12.6	10.3	Muscatine	39	18.5	17.5
	Des Moines	26	12.8	9.8	Plymouth	25	20.4	16.4
	Fayette	22	21.3	17.8	Sioux	33	20.6	16.1
	Henry	15	14.9	12.3	Wapello	35	19.7	15.7
	Jackson	22	22	16.6	Webster	31	16.1	12.1
	Jasper	28	15.2	11.8	Winneshiek	14	13.5	10.6
					<b>Total</b>	544	17.5	13.8
MSA Counties	Benton	20	15	13.2	Linn	136	13.4	12.9
	Black Hawk	111	17.5	15.7	Madison	10	13.2	11.8
	Bremer	17	14.5	11.9	Mills	13	17.3	14.8
	Dallas	39	14.3	18.6	Polk	240	11.7	12.4
	Dubuque	63	13.8	12.2	Pottawattamie	72	16.1	14.8
	Grundy	16	26.3	16.6	Scott	122	15.1	14.8
	Guthrie	12	21.6	14.4	Story	49	11.7	13.9
	Harrison	18	23.3	20.8	Warren	28	12.8	12.6
	Johnson	60	9.7	13.3	Washington	22	20.9	16.4
	Jones	14	13.7	10.7	Woodbury	64	12.6	12.1
					<b>Total</b>	1,126	13.7	13.5
	<b>State Total</b>	2,447	16.5	14.4				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\*Represents a count less than 5

# Leukemia Incidence by County Group 1976-2008



## Leukemia Mortality 2004-2008

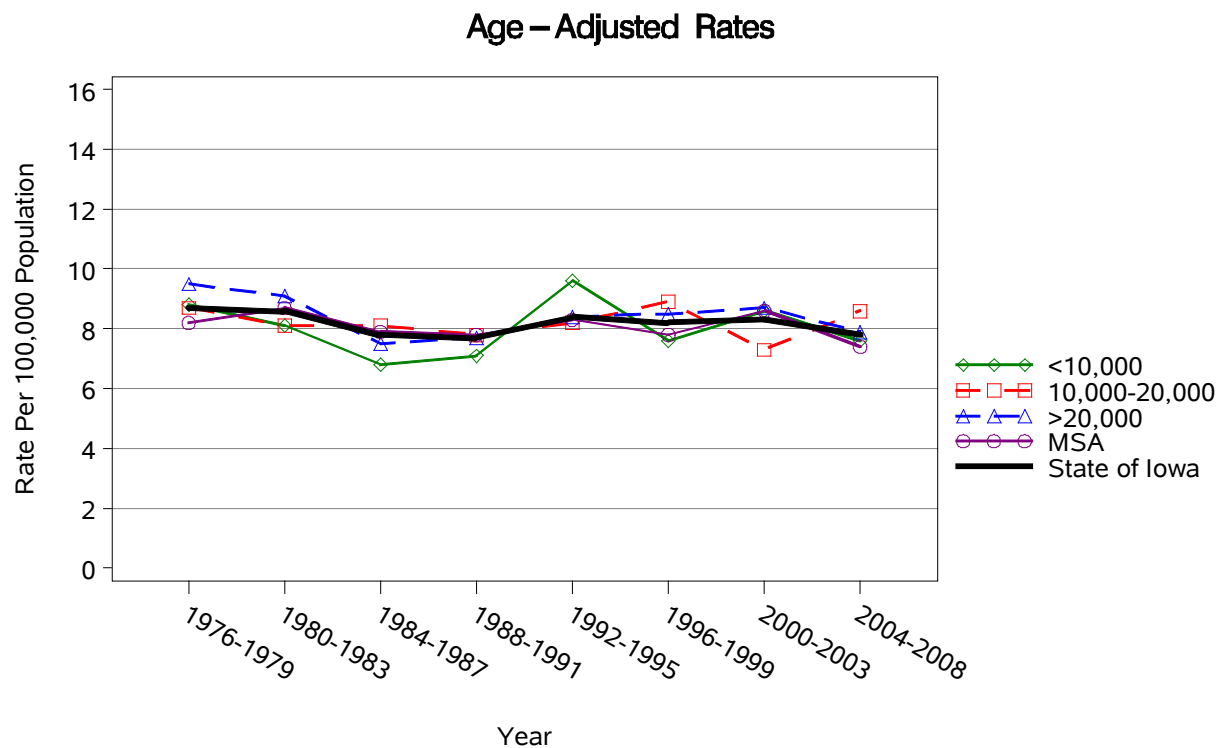
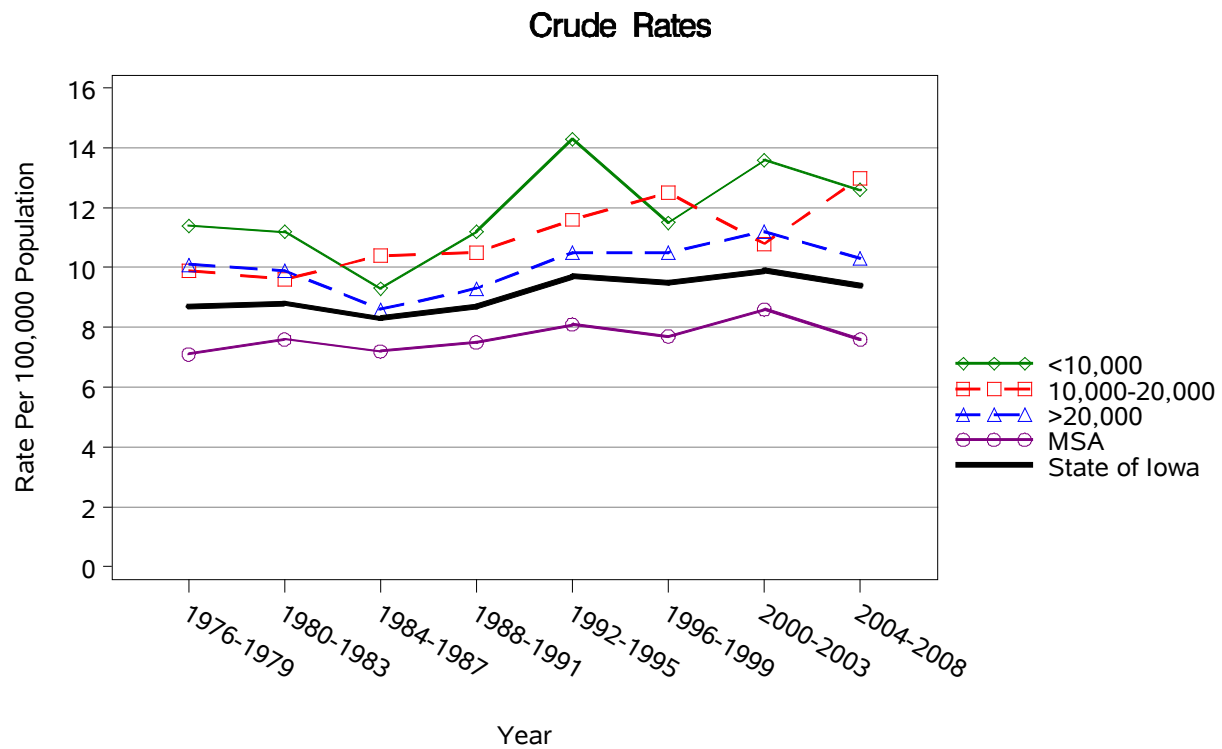
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	5	13.1	7.5	Lucas	6	12.6	8.9
	Adams	*	*	*	Monona	7	15.1	7.3
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	6	13.2	10.4	Osceola	*	*	*
	Davis	5	11.7	9.5	Palo Alto	*	*	*
	Decatur	5	12	8.8	Pocahontas	7	18.2	10.3
	Fremont	*	*	*	Ringgold	5	19.5	9.5
	Greene	*	*	*	Taylor	5	15.4	8.5
	Howard	*	*	*	Van Buren	6	15.7	10.5
	Humboldt	*	*	*	Wayne	9	28.2	15.2
	Ida	11	31.1	16.5	Worth	*	*	*
					<b>Total</b>	108	12.6	7.6
Counties with Average Population 10,000 – 20,000	Allamakee	9	12.5	9.7	Hardin	15	17	10.9
	Appanoose	10	15.3	10.4	Iowa	10	12.6	8.3
	Buena Vista	10	10.2	7.4	Jefferson	8	10.3	7.7
	Butler	13	17.7	10.8	Keokuk	8	14.8	8.6
	Calhoun	6	11.9	5.9	Kossuth	14	17.8	12.4
	Cass	14	20.1	11.8	Louisa	8	13.5	11
	Cedar	16	17.8	12.5	Lyon	9	15.9	9.4
	Cherokee	10	16.9	11.2	Mitchell	9	16.6	10.2
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	8	9.6	5.8	O'Brien	10	14.1	7.8
	Clayton	14	15.7	10.2	Page	11	13.8	11.9
	Crawford	8	9.7	7	Poweshiek	13	14	8.8
	Delaware	6	6.8	5.6	Sac	11	21.1	10.9
	Dickinson	10	12.1	7.8	Shelby	10	16.2	12.6
	Emmet	8	15.4	8.9	Tama	11	12.4	7.8
	Floyd	10	12.3	8.6	Union	*	*	*
	Franklin	5	9.4	5.8	Winnebago	5	9.1	5.4
	Hamilton	8	10.2	8.2	Wright	10	15.1	9.6
	Hancock	5	8.7	8.2	<b>Total</b>	339	13.0	8.6
Counties with Average Population > 20,000	Boone	12	9.1	6.3	Lee	28	15.6	12.1
	Buchanan	*	*	*	Mahaska	8	7.2	6.2
	Carroll	13	12.5	7.4	Marion	11	6.8	5.7
	Cerro Gordo	29	13.1	9.3	Marshall	23	11.8	9.3
	Clinton	19	7.7	6.2	Muscatine	26	12.3	11.7
	Des Moines	19	9.4	6.4	Plymouth	16	13.1	10.1
	Fayette	11	10.7	7.8	Sioux	20	12.5	9.4
	Henry	10	9.9	8.2	Wapello	15	8.4	6.7
	Jackson	14	14	9.7	Webster	19	9.9	7.5
	Jasper	17	9.2	7.1	Winneshiek	8	7.7	5.4
					<b>Total</b>	322	10.3	7.9
MSA Counties	Benton	5	3.8	3.1	Linn	79	7.8	7.6
	Black Hawk	58	9.2	8.4	Madison	7	9.3	8.5
	Bremer	11	9.4	6.4	Mills	5	6.7	5.8
	Dallas	19	7	9.6	Polk	126	6.2	6.6
	Dubuque	56	12.2	10.2	Pottawattamie	38	8.5	7.5
	Grundy	7	11.5	7.7	Scott	56	6.9	6.6
	Guthrie	5	9	5.1	Story	31	7.4	8.2
	Harrison	11	14.2	11.4	Warren	15	6.9	7.1
	Johnson	30	4.9	6.5	Washington	14	13.3	9.5
	Jones	11	10.8	7.5	Woodbury	42	8.3	7.5
					<b>Total</b>	626	7.6	7.4
<b>State Total</b>		1,395	9.4	7.8				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5

# Leukemia Mortality by County Group 1976-2008



## Oral Cavity (Excluding Lip) Cancer Incidence 2004-2008

	Counties with Average Population < 10,000				Counties with Average Population 10,000 – 20,000				Counties with Average Population > 20,000				MSA Counties			
	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	6	15.7 (18)	14.6 (06)	Lucas	6	12.6 (39)	9.0 (57)	Lee	23	12.8 (38)	9.6 (49)	Benton	15	11.3 (50)	10.0 (43)
	Adams	6	29.0 (01)	17.3 (01)	Monona	*	*	*	Mahaska	11	10.0 (66)	8.3 (64)	Black Hawk	75	11.8 (47)	11.3 (27)
	Audubon	*	*	*	Monroe	5	13.1 (35)	9.3 (55)	Marion	18	11.1 (51)	9.9 (46)	Bremer	12	10.2 (64)	8.2 (67)
	Clarke	6	13.2 (33)	10.0 (43)	Osceola	*	*	*	Marshall	32	16.4 (14)	12.9 (11)	Dallas	23	8.4 (85)	9.4 (52)
	Davis	*	*	*	Palo Alto	5	10.6 (59)	6.5 (82)	Muscatine	20	9.5 (70)	8.5 (62)	Dubuque	47	10.3 (63)	9.0 (57)
	Decatur	7	16.7 (11)	12.6 (15)	Pocahontas	*	*	*	Plymouth	16	13.1 (35)	10.5 (35)	Grundy	10	16.4 (14)	11.7 (22)
	Fremont	7	18.6 (07)	11.3 (27)	Ringgold	7	27.3 (02)	15.7 (03)	Sioux	15	9.4 (71)	8.8 (60)	Guthrie	7	12.6 (39)	8.9 (59)
	Greene	6	12.5 (41)	9.9 (46)	Taylor	*	*	*	Wapello	33	18.6 (07)	15.7 (03)	Harrison	12	15.5 (21)	12.5 (16)
	Howard	8	16.8 (10)	12.8 (12)	Van Buren	*	*	*	Webster	29	15.0 (23)	12.2 (17)	Johnson	45	7.3 (92)	9.2 (56)
	Humboldt	10	20.5 (04)	13.6 (08)	Wayne	7	22.0 (03)	15.2 (05)	Winneshiek	10	9.6 (68)	8.3 (64)	Jones	11	10.8 (56)	9.5 (50)
	Ida	*	*	*	Worth	*	*	*	<b>Total</b>	398	12.8	10.5				
					<b>Total</b>	115	13.5	9.5					<b>State Total</b>	1,673	11.3	10
Counties with Average Population 10,000 – 20,000	Allamakee	9	12.5 (41)	9.4 (52)	Hardin	9	10.2 (64)	7.1 (76)	Linn	109	10.8 (56)	10.1 (41)				
	Appanoose	6	9.2 (73)	6.6 (80)	Iowa	16	20.2 (05)	16.6 (02)	Madison	7	9.3 (72)	7.8 (70)				
	Buena Vista	9	9.2 (73)	9.4 (52)	Jefferson	13	16.7 (11)	13.4 (09)	Mills	5	6.7 (95)	5.2 (93)				
	Butler	*	*	*	Keokuk	5	9.2 (73)	6.7 (79)	Polk	218	10.7 (58)	11.1 (30)				
	Calhoun	8	15.8 (17)	10.4 (36)	Kossuth	6	7.6 (87)	6.3 (84)	Pottawattamie	41	9.2 (73)	8.1 (68)				
	Cass	6	8.6 (82)	7.6 (71)	Louisa	8	13.5 (28)	11.8 (19)	Scott	98	12.1 (44)	11.4 (26)				
	Cedar	10	11.1 (51)	8.7 (61)	Lyon	7	12.3 (43)	9.8 (48)	Story	27	6.5 (96)	7.9 (69)				
	Cherokee	*	*	*	Mitchell	*	*	*	Warren	24	11.0 (53)	10.3 (37)				
	Chickasaw	9	14.7 (24)	12.7 (14)	Montgomery	10	18.1 (09)	11.8 (19)	Washington	15	14.2 (26)	11.8 (19)				
	Clay	8	9.6 (68)	7.4 (73)	O'Brien	7	9.9 (67)	6.3 (84)	Woodbury	58	11.4 (49)	10.9 (31)				
	Clayton	14	15.7 (18)	11.7 (22)	Page	11	13.8 (27)	10.3 (37)	<b>Total</b>	859	10.4	10.2				
	Crawford	7	8.5 (83)	7.0 (77)	Poweshiek	7	7.5 (89)	6.6 (80)								
Delaware	6	6.8 (93)	5.4 (91)	Sac	6	11.5 (48)	9.5 (50)									
Dickinson	13	15.7 (18)	10.6 (34)	Shelby	5	8.1 (86)	5.9 (89)									
Emmet	7	13.4 (30)	10.8 (32)	Tama	12	13.5 (28)	10.7 (33)									
Floyd	6	7.4 (90)	6.4 (83)	Union	8	13.3 (32)	10.2 (40)									
Franklin	7	13.2 (33)	11.6 (24)	Winnebago	6	11.0 (53)	7.4 (73)									
Hamilton	6	7.6 (87)	7.0 (77)	Wright	11	16.7 (11)	11.9 (18)									
Hancock	11	19.2 (06)	13.7 (07)	<b>Total</b>	302	11.8	8.9									
Counties with Average Population > 20,000	Boone	21	16.0 (16)	12.8 (12)	Lee	23	12.8 (38)	9.6 (49)								
	Buchanan	16	15.3 (22)	13.2 (10)	Mahaska	11	10.0 (66)	8.3 (64)								
	Carroll	9	8.7 (79)	6.2 (86)	Marion	18	11.1 (51)	9.9 (46)								
	Cerro Gordo	29	13.1 (35)	10.3 (37)	Marshall	32	16.4 (14)	12.9 (11)								
	Clinton	33	13.4 (30)	11.3 (27)	Muscatine	20	9.5 (70)	8.5 (62)								
	Des Moines	29	14.3 (25)	11.5 (25)	Plymouth	16	13.1 (35)	10.5 (35)								
	Fayette	9	8.7 (79)	6.1 (87)	Sioux	15	9.4 (71)	8.8 (60)								
	Henry	11	10.9 (55)	10.1 (41)	Wapello	33	18.6 (07)	15.7 (03)								
	Jackson	12	12.0 (45)	8.5 (62)	Webster	29	15.0 (23)	12.2 (17)								
	Jasper	22	12.0 (45)	10.0 (43)	Winneshiek	10	9.6 (68)	8.3 (64)								
					<b>Total</b>	398	12.8	10.5								
	MSA Counties	Benton	15	11.3 (50)	10.0 (43)	Linn	109	10.8 (56)	10.1 (41)							
Black Hawk		75	11.8 (47)	11.3 (27)	Madison	7	9.3 (72)	7.8 (70)								
Bremer		12	10.2 (64)	8.2 (67)	Mills	5	6.7 (95)	5.2 (93)								
Dallas		23	8.4 (85)	9.4 (52)	Polk	218	10.7 (58)	11.1 (30)								
Dubuque		47	10.3 (63)	9.0 (57)	Pottawattamie	41	9.2 (73)	8.1 (68)								
Grundy		10	16.4 (14)	11.7 (22)	Scott	98	12.1 (44)	11.4 (26)								
Guthrie		7	12.6 (39)	8.9 (59)	Story	27	6.5 (96)	7.9 (69)								
Harrison		12	15.5 (21)	12.5 (16)	Warren	24	11.0 (53)	10.3 (37)								
Johnson		45	7.3 (92)	9.2 (56)	Washington	15	14.2 (26)	11.8 (19)								
Jones		11	10.8 (56)	9.5 (50)	Woodbury	58	11.4 (49)	10.9 (31)								
					<b>Total</b>	859	10.4	10.2								
<b>State Total</b>		1,673	11.3	10												

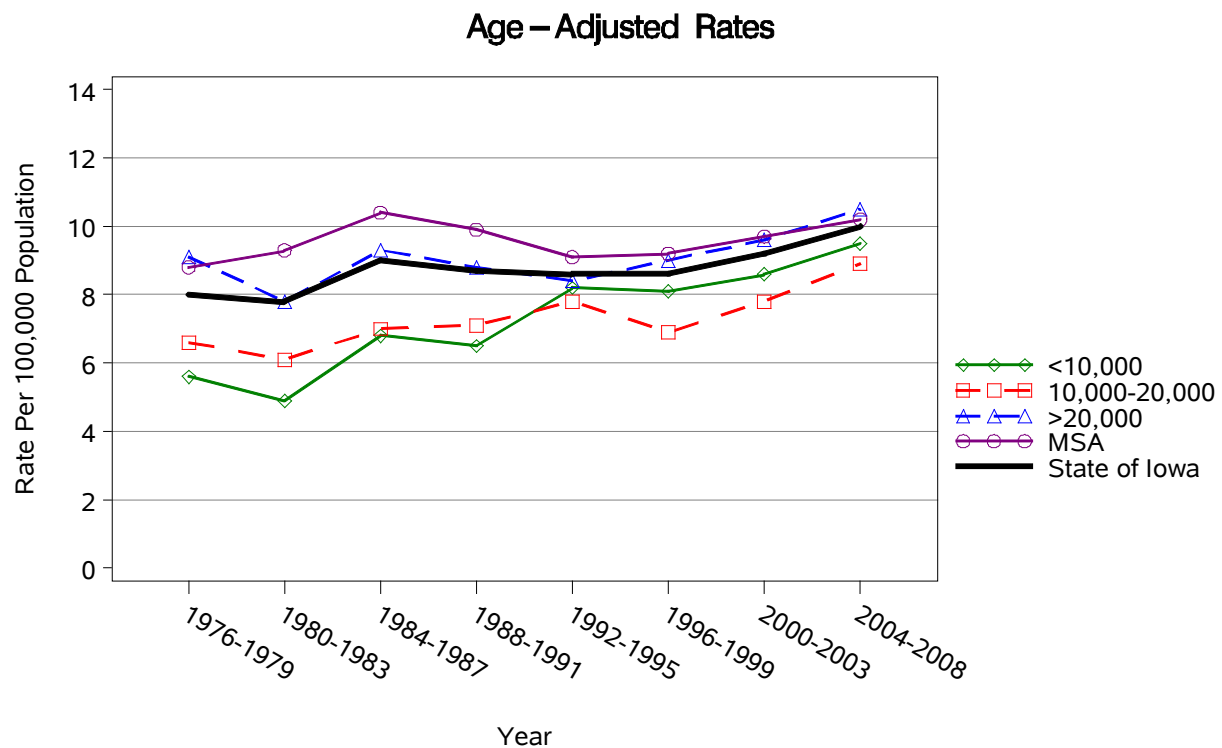
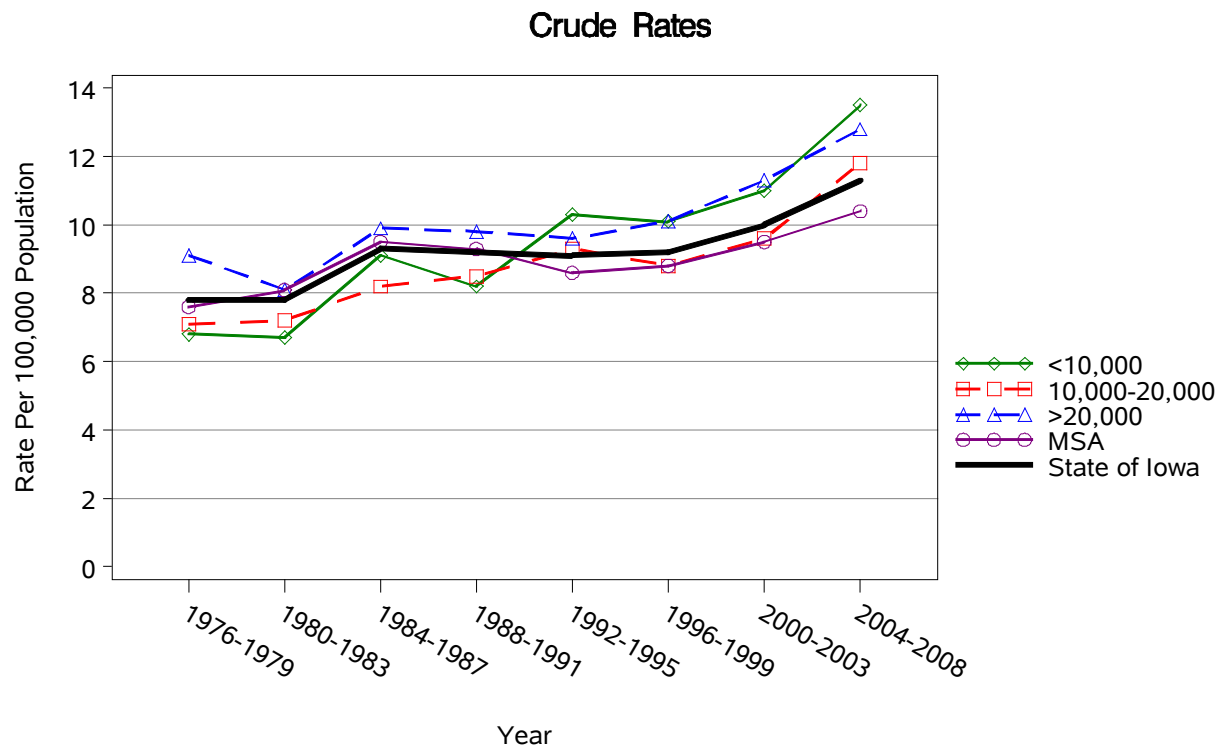
<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5



## Oral Cavity (Excluding Lip) Cancer Incidence by County Group 1976-2008



# Oral Cavity (Excluding Lip) Cancer Mortality 2004-2008

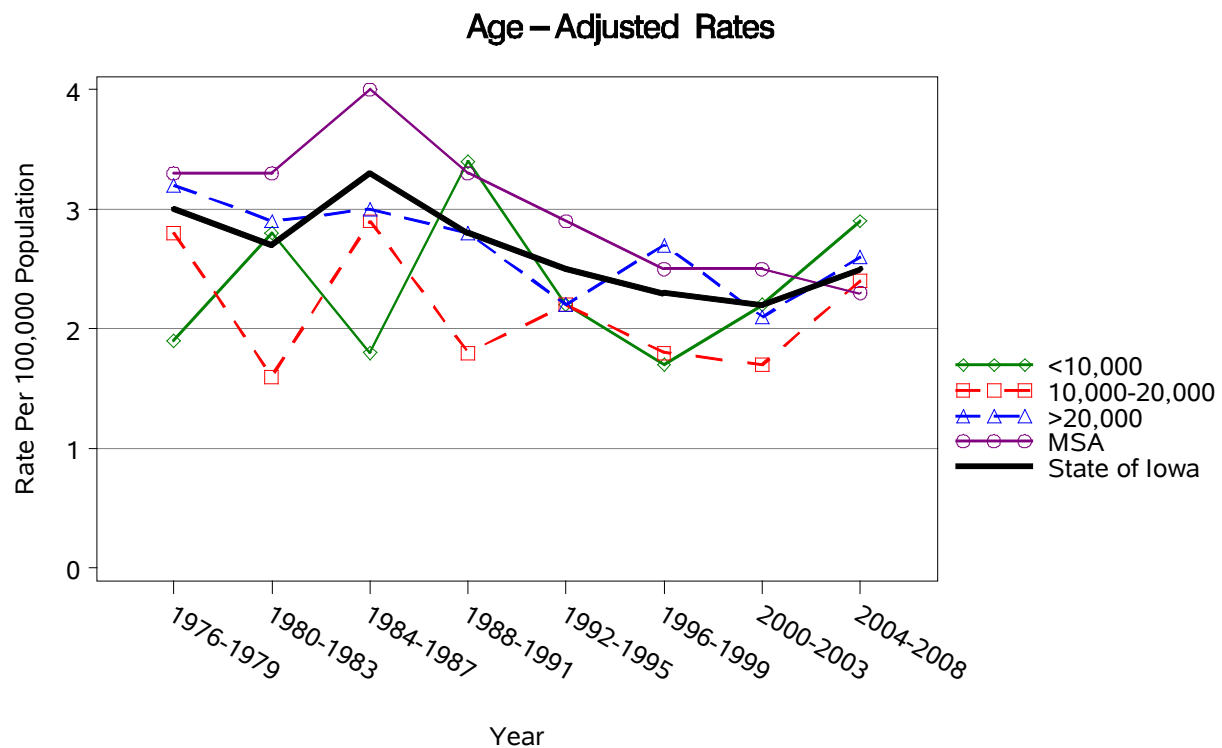
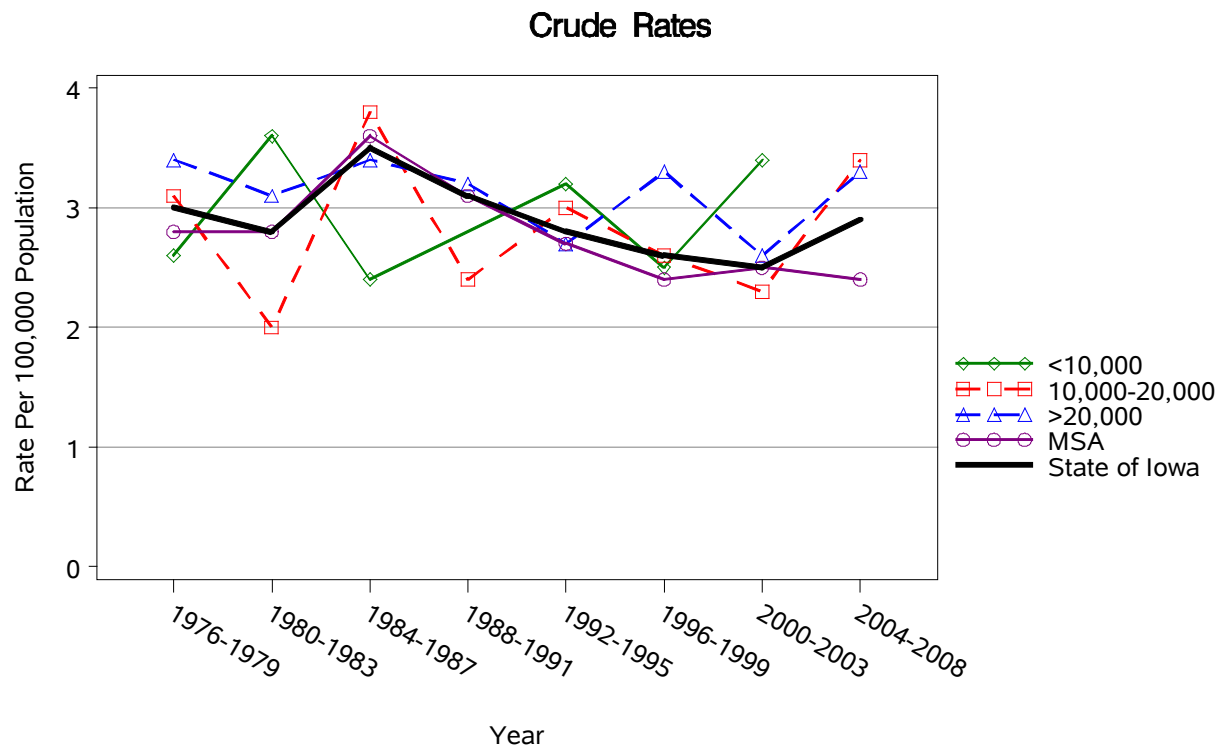
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	5	13	7
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	<b>41</b>	<b>4.8</b>	<b>3.0</b>
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	6	10.9	8.9
	Clay	7	8.4	6.4	O'Brien	*	*	*
	Clayton	8	9	6.3	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	5	8.3	6.1
	Franklin	5	9.4	6.3	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	<b>89</b>	<b>3.4</b>	<b>2.4</b>
Counties with Average Population > 20,000	Boone	7	5.3	4	Lee	6	3.3	2.6
	Buchanan	5	4.8	4	Mahaska	*	*	*
	Carroll	*	*	*	Marion	5	3.1	2.8
	Cerro Gordo	*	*	*	Marshall	*	*	*
	Clinton	12	4.9	3.7	Muscatine	6	2.8	2.8
	Des Moines	8	3.9	2.9	Plymouth	6	4.9	3.7
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	11	6.2	4.7
	Jackson	*	*	*	Webster	12	6.2	5.2
	Jasper	*	*	*	Winneshiek	5	4.8	3.6
					<b>Total</b>	<b>102</b>	<b>3.3</b>	<b>2.6</b>
MSA Counties	Benton	*	*	*	Linn	25	2.5	2.3
	Black Hawk	16	2.5	2.4	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	*	*	*	Polk	65	3.2	3.4
	Dubuque	9	2	1.6	Pottawattamie	11	2.5	2.1
	Grundy	*	*	*	Scott	13	1.6	1.6
	Guthrie	*	*	*	Story	*	*	*
	Harrison	*	*	*	Warren	*	*	*
	Johnson	11	1.8	2.5	Washington	5	4.7	3.7
	Jones	*	*	*	Woodbury	17	3.3	3.3
					<b>Total</b>	<b>203</b>	<b>2.5</b>	<b>2.4</b>
	<b>State Total</b>	<b>435</b>	<b>2.9</b>	<b>2.5</b>				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5

# Oral Cavity (Excluding Lip) Cancer Mortality by County Group 1976-2008



## Cervical Cancer Incidence 2004-2006

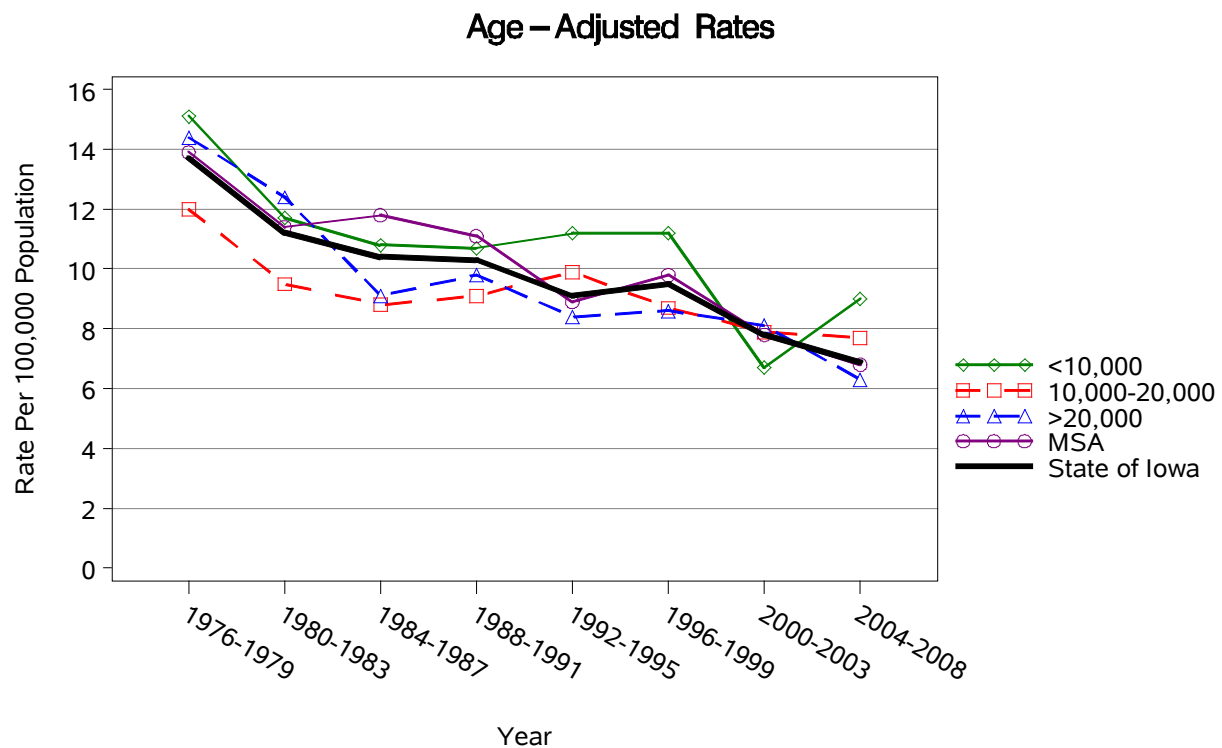
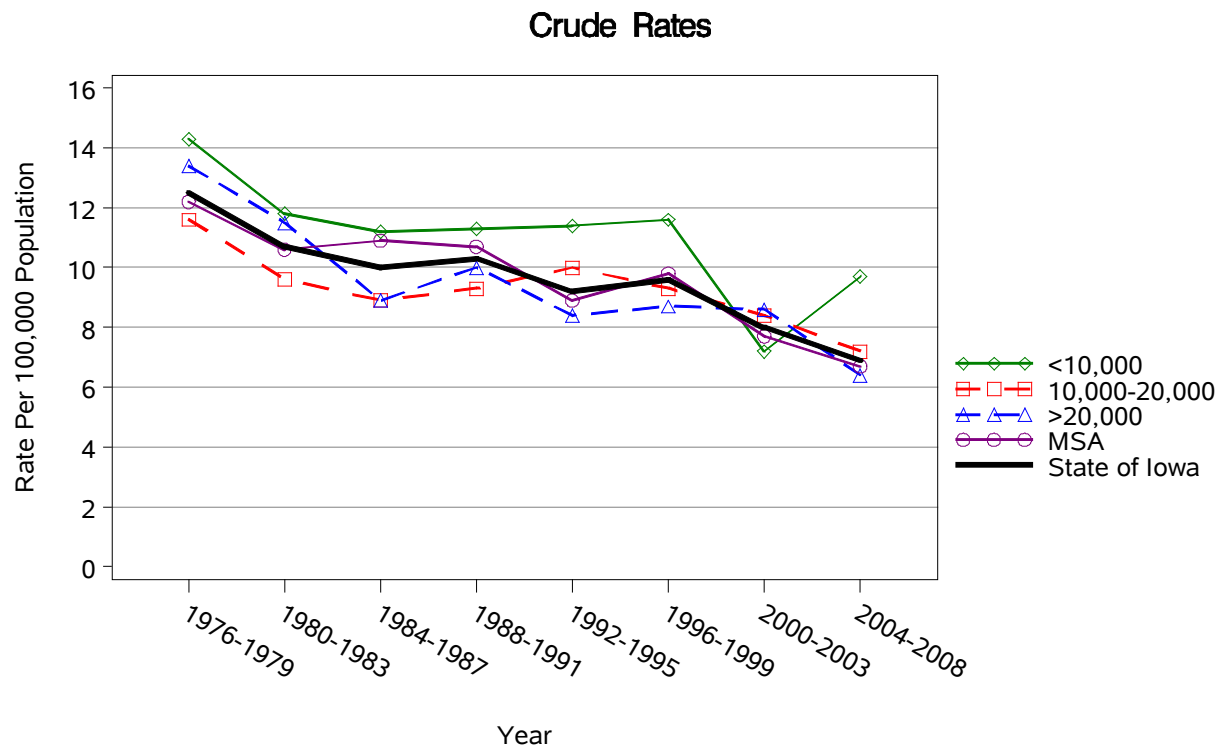
	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	6	30.8 (01)	31.7 (01)
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	42	9.7	9
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	5	12.7 (12)	15.3 (09)
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	5	11.4 (19)	12.5 (14)	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	5	15.0 (10)	15.4 (08)
	Hancock	*	*	*	<b>Total</b>	93	7.2	7.7
Counties with Average Population > 20,000	Boone	*	*	*	Lee	7	7.8 (41)	8.5 (32)
	Buchanan	*	*	*	Mahaska	5	9.1 (31)	7.3 (47)
	Carroll	5	9.4 (28)	7.4 (45)	Marion	*	*	*
	Cerro Gordo	11	9.6 (27)	9.7 (21)	Marshall	7	7.1 (47)	6.9 (54)
	Clinton	8	6.3 (54)	6.7 (57)	Muscatine	8	7.5 (42)	7.9 (36)
	Des Moines	7	6.7 (50)	6.7 (57)	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	*	*	*
	Jackson	6	11.9 (17)	13.5 (11)	Webster	11	11.6 (18)	12.1 (17)
	Jasper	5	5.5 (62)	5.9 (62)	Winneshiek	*	*	*
					<b>Total</b>	101	6.4	6.3
MSA Counties	Benton	*	*	*	Linn	33	6.4 (53)	6.3 (60)
	Black Hawk	27	8.2 (37)	9.2 (28)	Madison	*	*	*
	Bremer	5	8.3 (36)	7.7 (39)	Mills	*	*	*
	Dallas	10	7.3 (44)	6.9 (54)	Polk	75	7.1 (47)	7.1 (50)
	Dubuque	13	5.5 (62)	6.0 (61)	Pottawattamie	14	6.1 (57)	5.8 (63)
	Grundy	*	*	*	Scott	30	7.3 (44)	7.1 (50)
	Guthrie	5	17.9 (04)	23.7 (03)	Story	6	2.9 (85)	3.1 (83)
	Harrison	6	15.3 (07)	16.7 (05)	Warren	9	8.1 (38)	7.5 (44)
	Johnson	12	3.8 (78)	4.2 (74)	Washington	5	9.2 (30)	8.4 (34)
	Jones	5	10.4 (21)	12.5 (14)	Woodbury	21	8.1 (38)	8.5 (32)
					<b>Total</b>	281	6.7	6.8
	<b>State Total</b>	516	6.9	6.9				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5

# Cervical Cancer Incidence by County Group 1976-2008



## Cervical Cancer Mortality 2004-2008

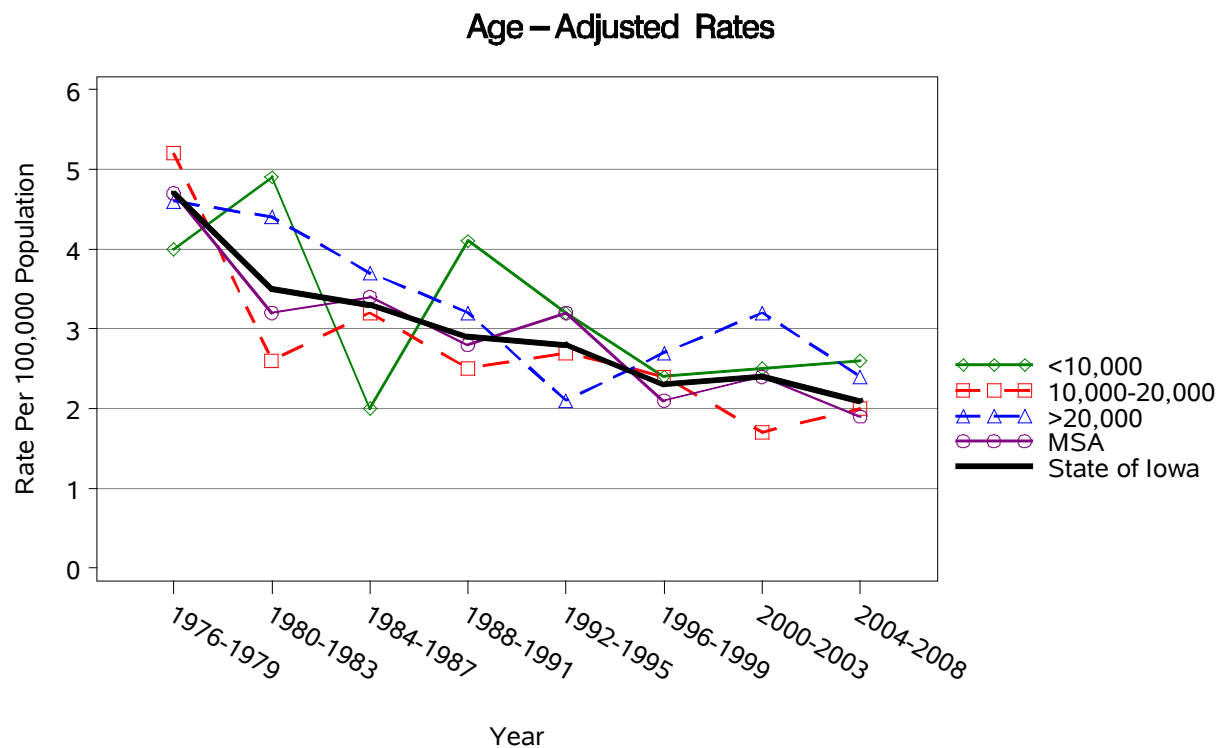
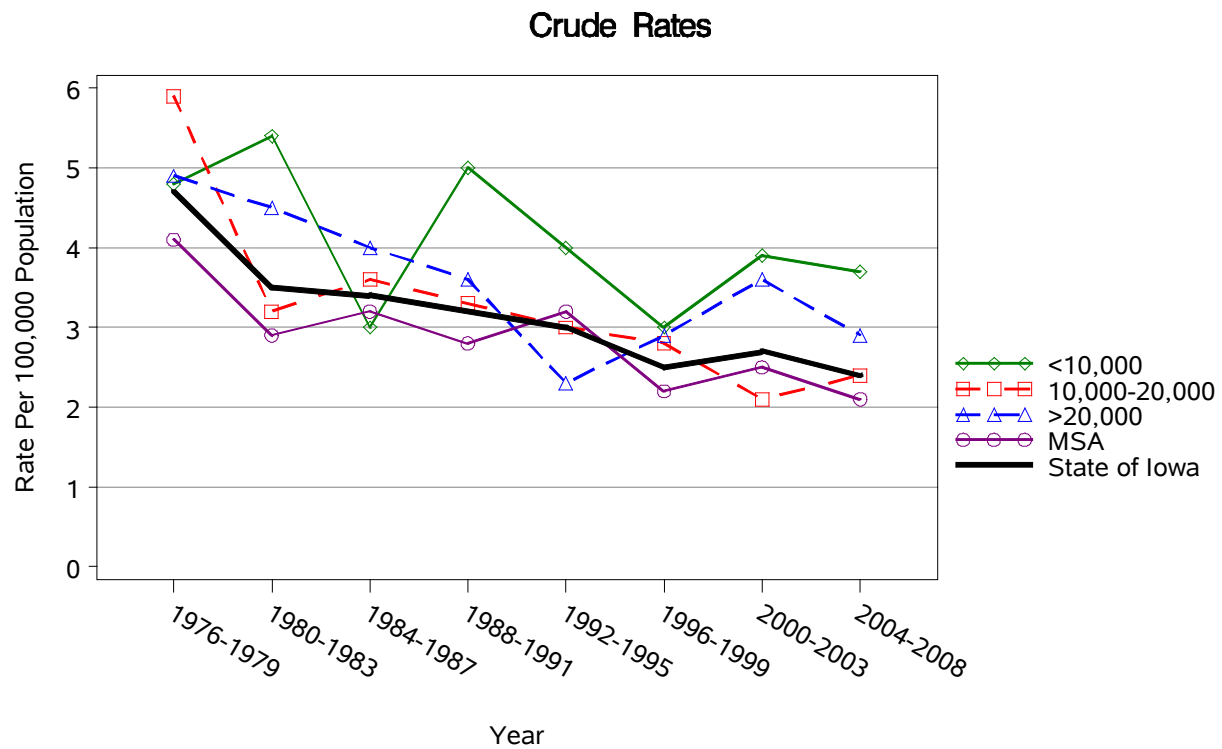
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	16	3.7	2.6
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	32	2.4	2.0
Counties with Average Population > 20,000	Boone	*	*	*	Lee	*	*	*
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	*	*	*
	Cerro Gordo	*	*	*	Marshall	*	*	*
	Clinton	*	*	*	Muscatine	*	*	*
	Des Moines	5	4.8	4.5	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	5	5.5	4.5
	Jackson	*	*	*	Webster	6	6.3	5.9
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	46	2.9	2.4
MSA Counties	Benton	*	*	*	Linn	15	2.9	2.7
	Black Hawk	8	2.4	2.5	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	*	*	*	Polk	18	1.7	1.7
	Dubuque	5	2.1	1.9	Pottawattamie	*	*	*
	Grundy	*	*	*	Scott	10	2.4	2.3
	Guthrie	*	*	*	Story	5	2.4	2.4
	Harrison	*	*	*	Warren	*	*	*
	Johnson	6	1.9	2.3	Washington	*	*	*
	Jones	*	*	*	Woodbury	7	2.7	2.7
					<b>Total</b>	86	2.1	1.9
	<b>State Total</b>	180	2.4	2.1				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* Represents a count less than 5

# Cervical Cancer Mortality by County Group 1976-2008







## Injury Mortality

Transportation-related mortality accounted for 2,296 deaths in Iowa from 2004 to 2008, 89% of which were motor vehicle fatalities. For the time periods between 1979 and 2008, the rates for these fatalities are highest in the rural counties and lowest in the most urban counties. Rates for firearm mortality are also highest in the most rural counties. The mortality rates for suicide show that the gaps in rates by county group have narrowed for the most recent time period. The crude rates for mortality from falls tend to be highest in the more rural county groups, because of the greater numbers of elderly, but have similar age-adjusted rates. Homicide rates are consistently higher in the MSA county group. Poisoning mortality rates have shown variation across earlier years for each county group, but are now increasing, with the highest rates in the MSA county group. The state's mortality rate from burns decreased from 1979-1983 to 2002-2003 and has leveled off during the 2004-2008 period. In general, drowning deaths have decreased across the state since the 1979-1983 period, but the pattern has been erratic, due to the instability of rates based on small counts. Deaths from all other unintentional injuries show a slight decline statewide over time, but can be difficult to compare for 1999-2008 versus preceding years due to changes in the mortality classification systems (discussed below).

### HIGHLIGHTS...

- ✓ Injuries are the leading cause of death in persons 1-34 years of age.
- ✓ Motor vehicle deaths account for 89% of all transportation deaths in Iowa during 2004-2008.
- ✓ Crude mortality rates from motor vehicle accidents, firearms, and falls are highest in rural counties, whereas homicides are highest in MSA counties.

Beginning in 1999, the tenth revision of the International Classification of Diseases (ICD-10) replaced the ninth version (ICD-9) as the standard mortality classification system. ICD-10 is more detailed than ICD-9; ICD-10 has about 8,000 categories while ICD-9 has about 5,000 categories. Also, some of the coding rules and rules for selecting the underlying cause of death have changed. Because of the new classification system, observed changes in mortality rates between 1999 and 2008 versus preceding years could be due, in part, to changes in the method of mortality classification. The ICD-9 and ICD-10 codes used for each type of Injury Mortality are listed in Appendix III.

The source of these mortality data are the cause of death data obtained from death certificates filed at the Iowa Department of Public Health. Analysis was done by the State Health Registry of Iowa and the Center for Public Health Statistics at the University of Iowa. Age-adjusted rates were calculated using the Year 2000 U.S. population distribution.

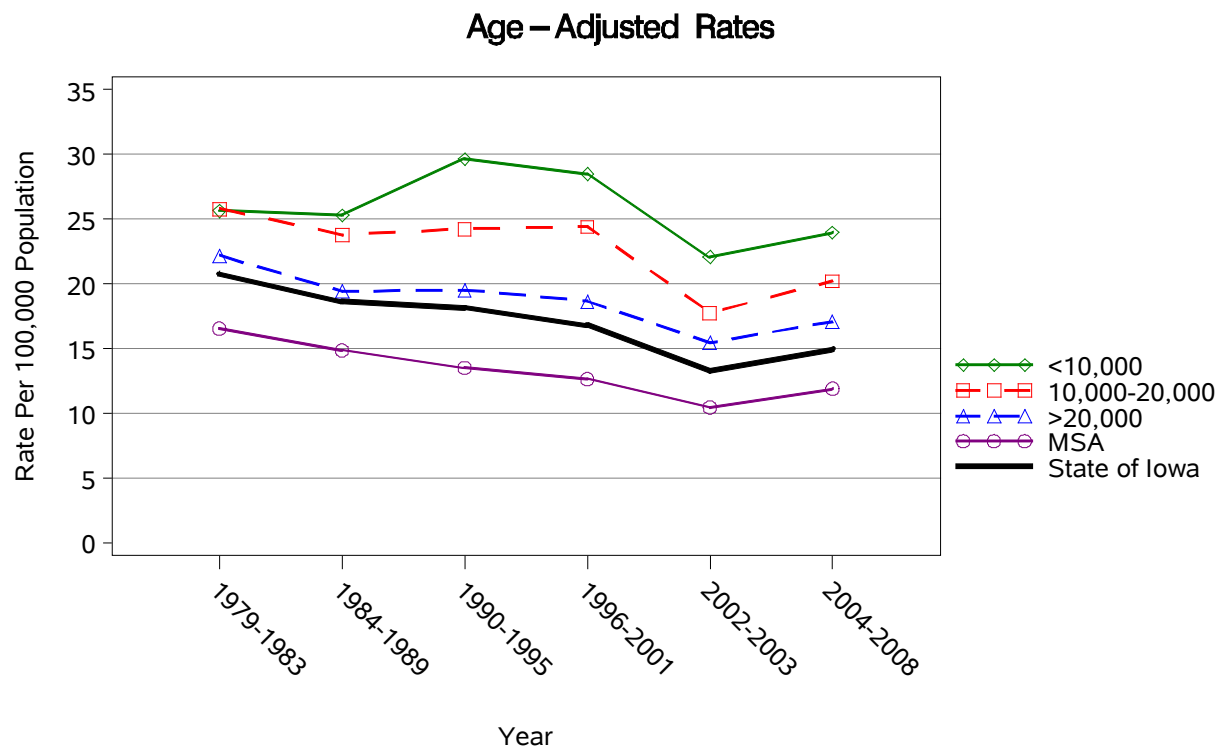
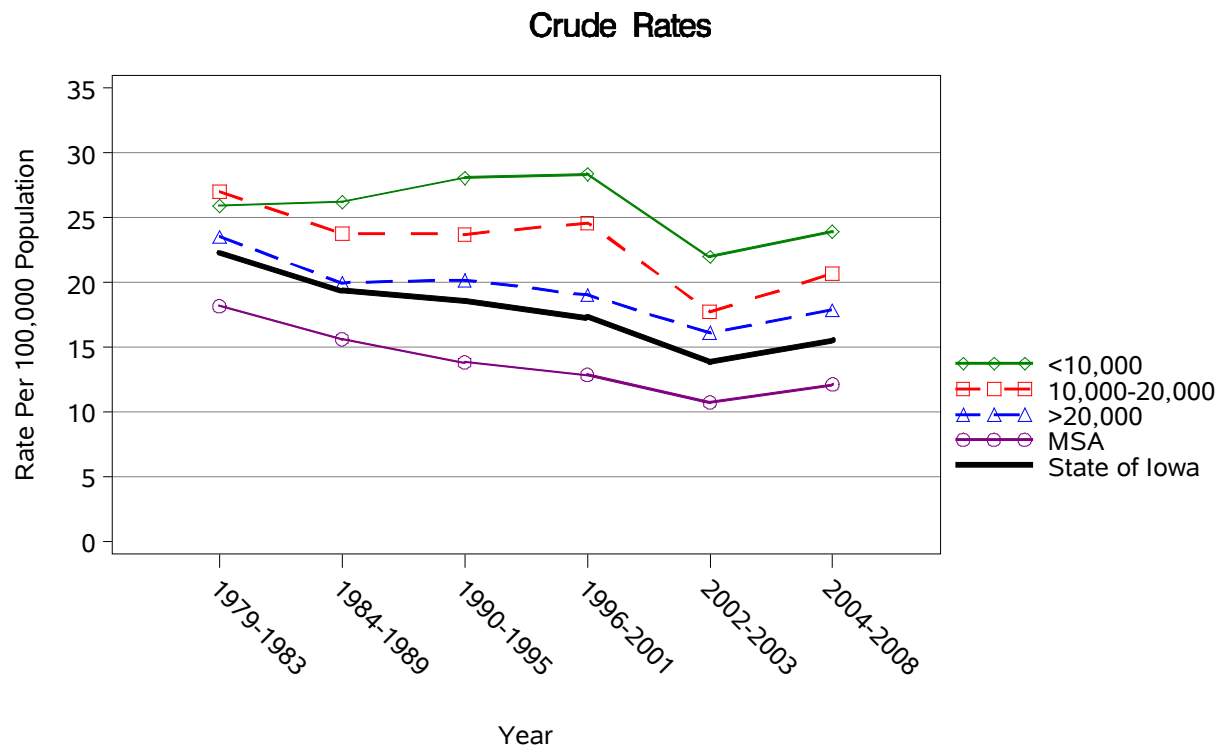
## All Transportation Mortality 2004-2008

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	11	28.4	29.1	Lucas	10	21.0	22.9
	Adams	*	*	*	Monona	11	23.5	27.1
	Audubon	6	19.1	18.4	Monroe	6	15.6	16.4
	Clarke	13	28.5	31.3	Osceola	9	27.1	22.6
	Davis	11	25.8	26.5	Palo Alto	14	29.3	30.1
	Decatur	6	14.3	15.0	Pocahontas	7	17.9	22.8
	Fremont	10	26.3	24.0	Ringgold	*	*	*
	Greene	8	16.4	14.2	Taylor	*	*	*
	Howard	16	33.3	32.1	Van Buren	14	36.6	38.0
	Humboldt	15	30.5	33.7	Wayne	6	18.7	18.2
	Ida	14	39.0	41.6	Worth	8	20.8	16.6
					<b>Total</b>	206	23.9	24.0
Counties with Average Population 10,000 – 20,000	Allamakee	15	20.8	21.6	Hardin	23	25.8	22.0
	Appanoose	15	22.7	22.1	Iowa	17	21.4	21.0
	Buena Vista	15	15.2	13.5	Jefferson	13	16.7	16.8
	Butler	22	29.9	30.2	Keokuk	13	23.8	24.6
	Calhoun	13	25.4	25.8	Kossuth	10	12.6	10.4
	Cass	14	20.0	18.1	Louisa	17	28.5	27.9
	Cedar	12	13.3	13.4	Lyon	12	21.0	22.1
	Cherokee	18	30.0	24.7	Mitchell	11	20.3	22.5
	Chickasaw	20	32.4	31.0	Montgomery	13	23.4	22.9
	Clay	19	22.6	22.9	O'Brien	16	22.4	20.2
	Clayton	24	26.8	24.9	Page	12	15.0	15.0
	Crawford	16	19.3	20.4	Poweshiek	20	21.4	20.7
	Delaware	12	13.6	14.7	Sac	19	35.9	37.4
	Dickinson	17	20.6	19.6	Shelby	14	22.4	21.3
	Emmet	*	*	*	Tama	23	25.8	27.3
	Floyd	6	7.3	7.4	Union	12	20.1	21.5
	Franklin	12	22.6	15.9	Winnebago	11	19.9	20.1
	Hamilton	17	21.4	21.3	Wright	13	19.5	23.3
	Hancock	*	*	*	<b>Total</b>	544	20.7	20.2
Counties with Average Population > 20,000	Boone	32	24.4	23.1	Lee	28	15.5	14.5
	Buchanan	18	17.3	18.5	Mahaska	17	15.4	14.8
	Carroll	21	20.1	16.9	Marion	24	14.8	14.2
	Cerro Gordo	34	15.3	14.7	Marshall	30	15.4	14.9
	Clinton	37	15.0	14.3	Muscatine	32	15.2	15.4
	Des Moines	32	15.7	14.9	Plymouth	29	23.7	25.4
	Fayette	27	25.9	25.2	Sioux	23	14.4	14.1
	Henry	26	25.9	24.4	Wapello	42	23.6	22.5
	Jackson	16	16.0	15.6	Webster	40	20.6	19.2
	Jasper	36	19.5	18.6	Winneshek	13	12.5	11.9
					<b>Total</b>	557	17.9	17.1
MSA Counties	Benton	25	18.9	18.6	Linn	98	9.8	9.6
	Black Hawk	89	14.1	13.7	Madison	8	10.7	10.4
	Bremer	13	11.1	11.6	Mills	12	16.1	16.1
	Dallas	37	14.3	14.3	Polk	225	11.2	11.3
	Dubuque	49	10.8	10.6	Pottawattamie	64	14.4	14.4
	Grundy	11	18.0	16.7	Scott	82	10.2	10.2
	Guthrie	16	28.6	30.2	Story	45	10.9	11.3
	Harrison	28	36.1	36.7	Warren	39	18.1	17.7
	Johnson	48	7.9	8.3	Washington	16	15.2	15.0
	Jones	18	17.7	16.3	Woodbury	66	13.0	12.7
					<b>Total</b>	989	12.1	11.9
<b>State Total</b>		2,296	15.5	15.0				

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

# All Transportation Mortality by County Group 1979-2008



# Motor Vehicle Traffic Mortality 2004-2008

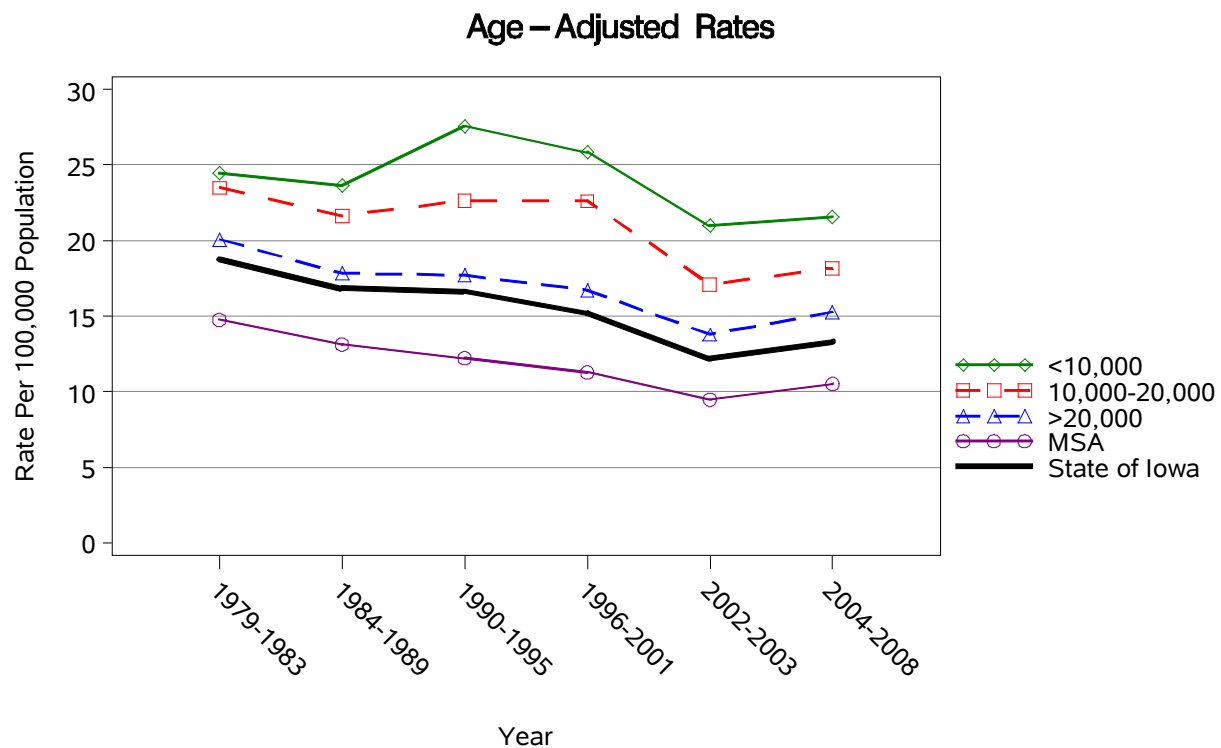
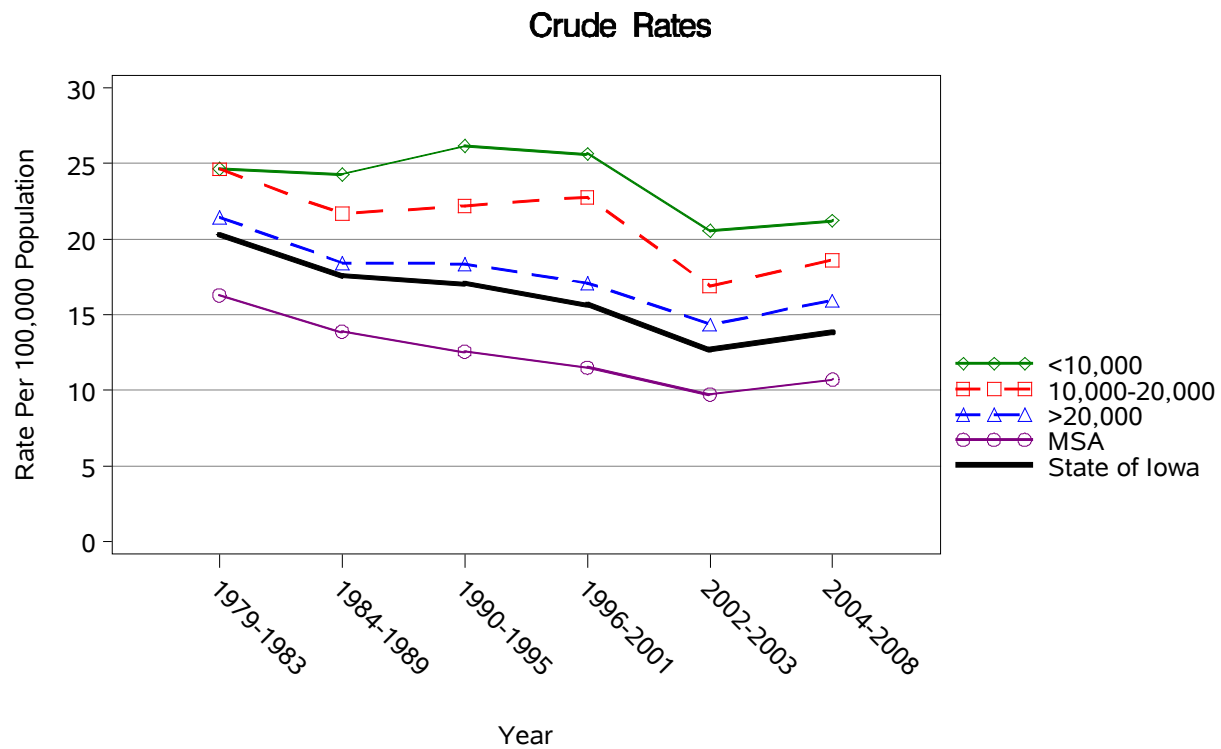
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	11	28.4	29.1	Lucas	9	18.9	21.0
	Adams	*	*	*	Monona	8	17.1	22.4
	Audubon	6	19.1	18.4	Monroe	5	13.0	13.6
	Clarke	11	24.1	26.8	Osceola	8	24.1	21.1
	Davis	9	21.1	22.8	Palo Alto	12	25.1	26.7
	Decatur	5	11.9	12.4	Pocahontas	7	17.9	22.8
	Fremont	10	26.3	24.0	Ringgold	*	*	*
	Greene	7	14.4	12.7	Taylor	*	*	*
	Howard	13	27.1	24.5	Van Buren	13	34.0	36.5
	Humboldt	14	28.5	30.3	Wayne	5	15.5	16.2
	Ida	12	33.4	35.6	Worth	7	18.2	14.6
					<b>Total</b>	<b>183</b>	<b>21.2</b>	<b>21.6</b>
Counties with Average Population 10,000 – 20,000	Allamakee	15	20.8	21.6	Hardin	22	24.7	21.1
	Appanoose	15	22.7	22.1	Iowa	12	15.1	15.4
	Buena Vista	13	13.2	11.6	Jefferson	12	15.4	16.1
	Butler	21	28.6	29.3	Keokuk	13	23.8	24.6
	Calhoun	13	25.4	25.8	Kossuth	10	12.6	10.4
	Cass	11	15.7	13.7	Louisa	12	20.1	20.2
	Cedar	10	11.1	10.7	Lyon	11	19.3	20.4
	Cherokee	17	28.3	22.1	Mitchell	8	14.8	16.0
	Chickasaw	19	30.8	29.5	Montgomery	11	19.8	19.4
	Clay	19	22.6	22.9	O'Brien	14	19.6	18.2
	Clayton	22	24.6	22.7	Page	10	12.5	12.0
	Crawford	12	14.5	15.3	Poweshiek	19	20.3	19.8
	Delaware	10	11.3	12.3	Sac	19	35.9	37.4
	Dickinson	17	20.6	19.6	Shelby	14	22.4	21.3
	Emmet	*	*	*	Tama	20	22.4	24.1
	Floyd	5	6.1	5.9	Union	12	20.1	21.5
	Franklin	11	20.7	14.5	Winnebago	9	16.3	18.1
	Hamilton	14	17.6	17.5	Wright	11	16.5	19.6
	Hancock	*	*	*	<b>Total</b>	<b>490</b>	<b>18.6</b>	<b>18.2</b>
Counties with Average Population > 20,000	Boone	30	22.9	21.7	Lee	22	12.2	11.1
	Buchanan	15	14.4	14.7	Mahaska	16	14.5	14.3
	Carroll	19	18.2	15.3	Marion	23	14.2	13.6
	Cerro Gordo	29	13.1	12.4	Marshall	26	13.3	13.2
	Clinton	35	14.2	13.8	Muscatine	31	14.8	15.0
	Des Moines	27	13.3	12.5	Plymouth	29	23.7	25.4
	Fayette	21	20.1	19.3	Sioux	22	13.8	13.5
	Henry	25	24.9	23.2	Wapello	35	19.6	19.0
	Jackson	14	14.0	14.1	Webster	35	18.1	16.9
	Jasper	31	16.8	16.4	Winneshiek	12	11.5	11.1
					<b>Total</b>	<b>497</b>	<b>15.9</b>	<b>15.3</b>
MSA Counties	Benton	23	17.4	17.4	Linn	88	8.8	8.6
	Black Hawk	77	12.2	12.1	Madison	8	10.7	10.4
	Bremer	13	11.1	11.6	Mills	10	13.4	13.7
	Dallas	32	12.3	12.3	Polk	196	9.7	9.8
	Dubuque	43	9.4	9.4	Pottawattamie	56	12.6	12.6
	Grundy	10	16.4	14.5	Scott	70	8.7	8.7
	Guthrie	16	28.6	30.2	Story	39	9.4	9.8
	Harrison	26	33.5	34.1	Warren	35	16.3	16.1
	Johnson	42	6.9	7.2	Washington	16	15.2	15.0
	Jones	16	15.7	14.3	Woodbury	58	11.4	11.1
	<b>State Total</b>	<b>2,044</b>	<b>13.8</b>	<b>13.3</b>	<b>Total</b>	<b>874</b>	<b>10.7</b>	<b>10.5</b>

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

\* Represents a count less than 5

# Motor Vehicle Traffic Mortality by County Group 1979-2008



## Suicides 2004-2008

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	5	10.5	8.4
	Adams	*	*	*	Monona	8	17.1	16.5
	Audubon	*	*	*	Monroe	5	13.0	13.8
	Clarke	7	15.4	15.0	Osceola	5	15.1	14.7
	Davis	*	*	*	Palo Alto	6	12.6	14.9
	Decatur	*	*	*	Pocahontas	8	20.4	23.3
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	9	18.3	18.5	Wayne	6	18.7	17.1
	Ida	*	*	*	Worth	6	15.6	14.2
					<b>Total</b>	103	11.9	12.0
Counties with Average Population 10,000 – 20,000	Allamakee	8	11.1	10.6	Hardin	12	13.5	14.6
	Appanoose	11	16.6	18.3	Iowa	11	13.9	15.5
	Buena Vista	8	8.1	9.3	Jefferson	12	15.4	15.7
	Butler	7	9.5	10.1	Keokuk	9	16.5	18.4
	Calhoun	8	15.6	17.9	Kossuth	6	7.5	8.3
	Cass	8	11.4	11.1	Louisa	5	8.4	8.6
	Cedar	11	12.2	11.2	Lyon	*	*	*
	Cherokee	8	13.3	12.2	Mitchell	*	*	*
	Chickasaw	11	17.8	18.4	Montgomery	6	10.8	10.0
	Clay	9	10.7	11.7	O'Brien	5	7.0	8.3
	Clayton	11	12.3	11.3	Page	8	10.0	8.6
	Crawford	8	9.6	11.2	Poweshiek	8	8.6	8.0
	Delaware	12	13.6	13.0	Sac	10	18.9	19.8
	Dickinson	10	12.1	11.7	Shelby	5	8.0	9.8
	Emmet	8	15.3	15.2	Tama	8	9.0	9.7
	Floyd	12	14.7	13.7	Union	10	16.7	18.9
	Franklin	7	13.2	13.2	Winnebago	*	*	*
	Hamilton	9	11.3	10.2	Wright	9	13.5	15.3
	Hancock	5	8.6	9.5	<b>Total</b>	306	11.6	12.1
Counties with Average Population > 20,000	Boone	15	11.4	11.2	Lee	35	19.4	19.1
	Buchanan	10	9.6	9.5	Mahaska	13	11.8	11.4
	Carroll	12	11.5	12.1	Marion	23	14.2	13.6
	Cerro Gordo	24	10.8	10.8	Marshall	18	9.2	9.6
	Clinton	36	14.6	14.5	Muscatine	31	14.8	15.5
	Des Moines	35	17.2	17.9	Plymouth	14	11.4	11.8
	Fayette	12	11.5	12.5	Sioux	7	4.4	4.8
	Henry	9	8.9	8.5	Wapello	18	10.1	10.1
	Jackson	17	17.0	19.3	Webster	21	10.8	12.2
	Jasper	24	13.0	12.2	Winneshek	12	11.5	11.0
					<b>Total</b>	386	12.4	12.4
MSA Counties	Benton	13	9.8	11.0	Linn	96	9.6	9.5
	Black Hawk	48	7.6	7.7	Madison	11	14.8	15.4
	Bremer	14	11.9	11.5	Mills	7	9.4	10.1
	Dallas	19	7.3	7.5	Polk	264	13.1	13.3
	Dubuque	52	11.4	11.5	Pottawattamie	49	11.0	11.1
	Grundy	*	*	*	Scott	92	11.5	11.4
	Guthrie	8	14.3	11.5	Story	38	9.2	10.4
	Harrison	8	10.3	9.3	Warren	28	13.0	12.8
	Johnson	56	9.2	10.4	Washington	8	7.6	7.2
	Jones	13	12.8	12.3	Woodbury	58	11.4	11.6
					<b>Total</b>	886	10.9	10.8
	<b>State Total</b>	1,681	11.4	11.3				

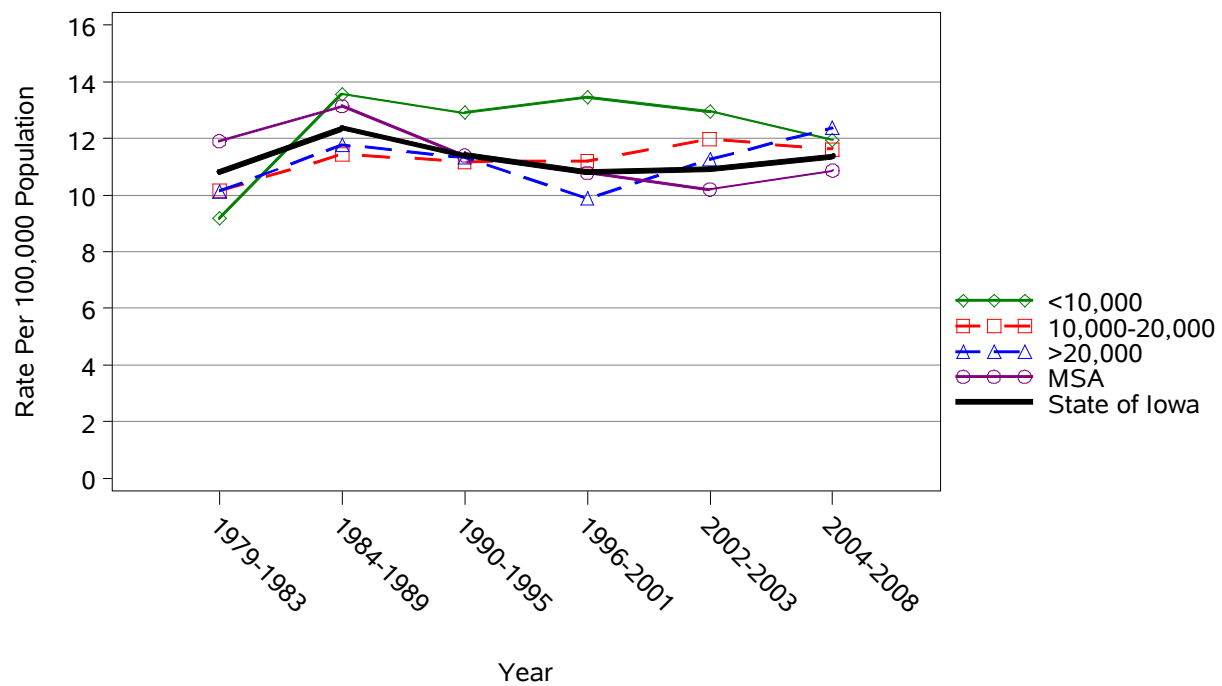
<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

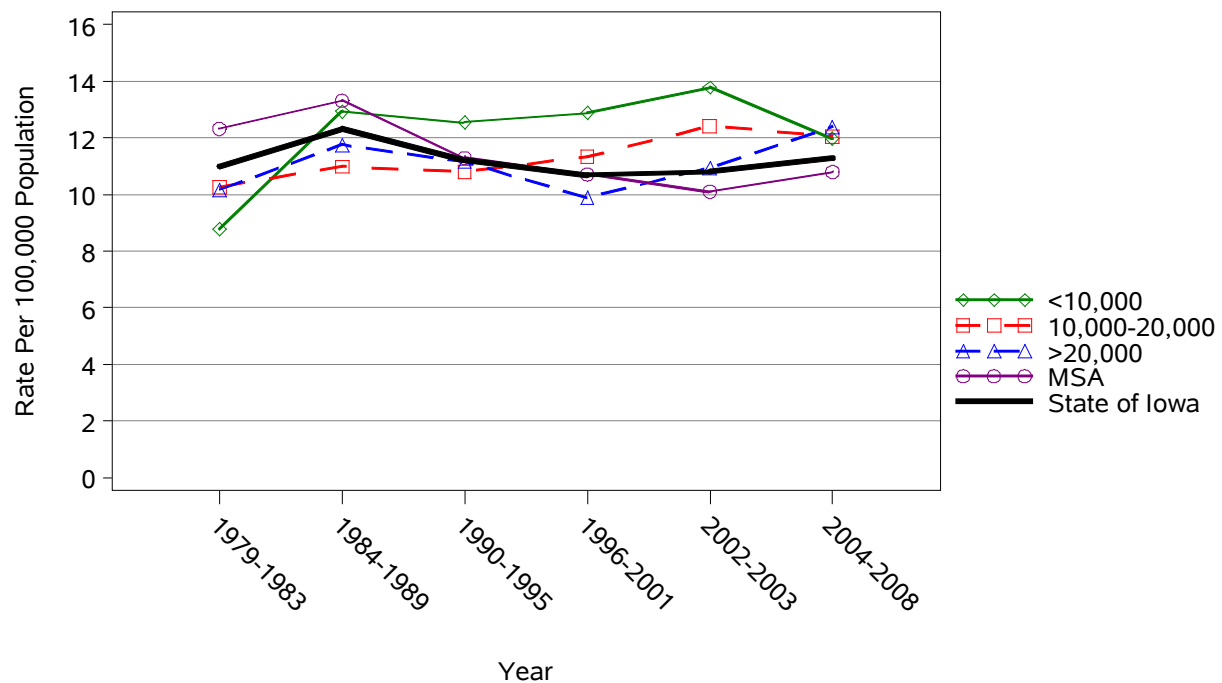
\* Represents a count less than 5

# Suicides by County Group 1979-2008

## Crude Rates



## Age-Adjusted Rates



## Falls Mortality 2004-2008

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	11	28.4	12.0	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	7	22.3	11.3	Monroe	8	20.8	12.1
	Clarke	5	11.0	6.6	Osceola	6	18.1	13.2
	Davis	5	11.7	8.6	Palo Alto	7	14.7	7.2
	Decatur	5	11.9	8.0	Pocahontas	8	20.4	8.1
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	7	14.4	5.7	Taylor	5	15.2	6.1
	Howard	6	12.5	6.5	Van Buren	*	*	*
	Humboldt	5	10.2	5.5	Wayne	9	28.0	14.2
	Ida	8	22.3	9.8	Worth	*	*	*
					<b>Total</b>	<b>119</b>	<b>13.8</b>	<b>7.4</b>
Counties with Average Population 10,000 – 20,000	Allamakee	10	13.9	8.3	Hardin	13	14.6	7.4
	Appanoose	*	*	*	Iowa	14	17.7	10.7
	Buena Vista	6	6.1	4.6	Jefferson	10	12.8	8.9
	Butler	19	25.8	15.1	Keokuk	*	*	*
	Calhoun	10	19.5	10.0	Kossuth	11	13.8	7.2
	Cass	13	18.6	7.7	Louisa	6	10.1	7.9
	Cedar	13	14.4	9.7	Lyon	8	14.0	9.2
	Cherokee	12	20.0	10.8	Mitchell	10	18.5	8.9
	Chickasaw	14	22.7	14.0	Montgomery	*	*	*
	Clay	10	11.9	7.8	O'Brien	8	11.2	5.0
	Clayton	11	12.3	7.8	Page	11	13.7	8.3
	Crawford	16	19.3	12.1	Poweshiek	12	12.8	7.4
	Delaware	10	11.3	8.1	Sac	8	15.1	7.7
	Dickinson	12	14.5	9.1	Shelby	12	19.2	9.9
	Emmet	9	17.2	10.4	Tama	14	15.7	9.3
	Floyd	16	19.6	10.9	Union	9	15.1	8.0
	Franklin	10	18.8	11.3	Winnebago	11	19.9	10.8
	Hamilton	16	20.2	13.4	Wright	13	19.5	9.4
	Hancock	11	19.0	10.7	<b>Total</b>	<b>396</b>	<b>15.0</b>	<b>8.7</b>
Counties with Average Population > 20,000	Boone	14	10.7	8.2	Lee	31	17.1	11.9
	Buchanan	10	9.6	7.9	Mahaska	13	11.8	8.8
	Carroll	11	10.5	5.6	Marion	27	16.6	11.1
	Cerro Gordo	36	16.2	10.3	Marshall	32	16.4	11.1
	Clinton	13	5.3	4.0	Muscatine	18	8.6	8.0
	Des Moines	30	14.7	10.3	Plymouth	7	5.7	3.9
	Fayette	9	8.6	4.7	Sioux	14	8.8	5.8
	Henry	13	12.9	7.9	Wapello	26	14.6	10.3
	Jackson	6	6.0	4.4	Webster	35	18.1	11.6
	Jasper	28	15.1	11.2	Winnesiek	9	8.6	5.8
					<b>Total</b>	<b>382</b>	<b>12.2</b>	<b>8.5</b>
MSA Counties	Benton	14	10.6	7.5	Linn	96	9.6	9.0
	Black Hawk	73	11.6	9.3	Madison	7	9.4	7.6
	Bremer	14	11.9	8.2	Mills	8	10.7	9.6
	Dallas	22	8.5	10.4	Polk	173	8.6	8.7
	Dubuque	44	9.7	7.0	Pottawattamie	29	6.5	5.8
	Grundy	8	13.1	6.3	Scott	89	11.1	10.7
	Guthrie	7	12.5	7.5	Story	23	5.6	5.9
	Harrison	10	12.9	7.8	Warren	23	10.7	9.8
	Johnson	51	8.4	11.6	Washington	28	26.6	16.5
	Jones	9	8.9	5.9	Woodbury	40	7.9	6.9
					<b>Total</b>	<b>768</b>	<b>9.4</b>	<b>8.7</b>
<b>State Total</b>		<b>1,665</b>	<b>11.3</b>	<b>8.5</b>				

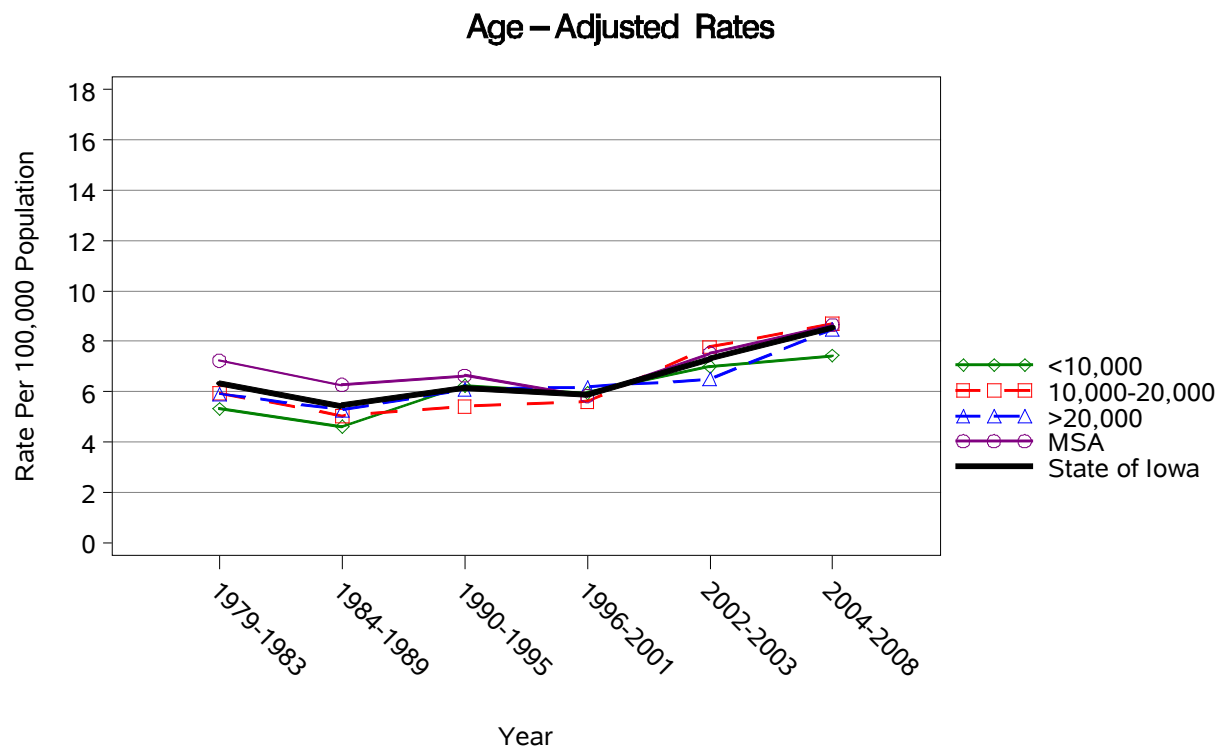
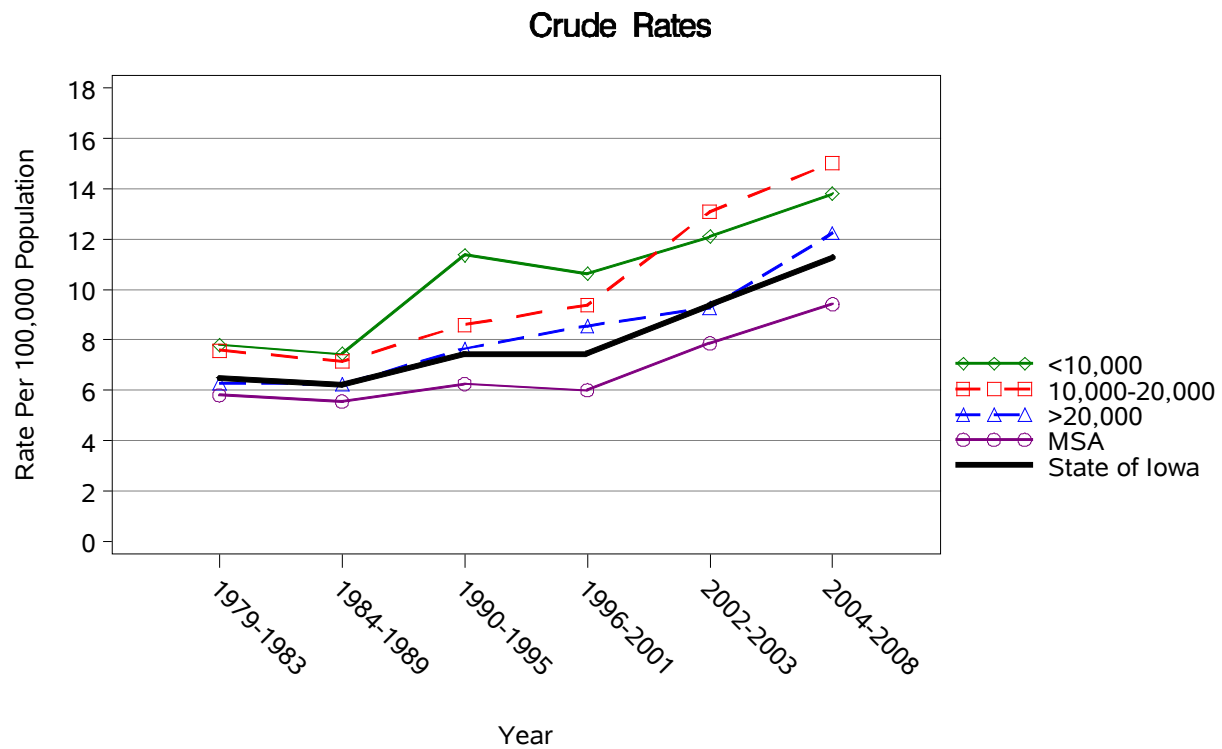
<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

\* Represents a count less than 5



# Falls Mortality by County Group 1979-2008



## Firearms Mortality 2004-2008

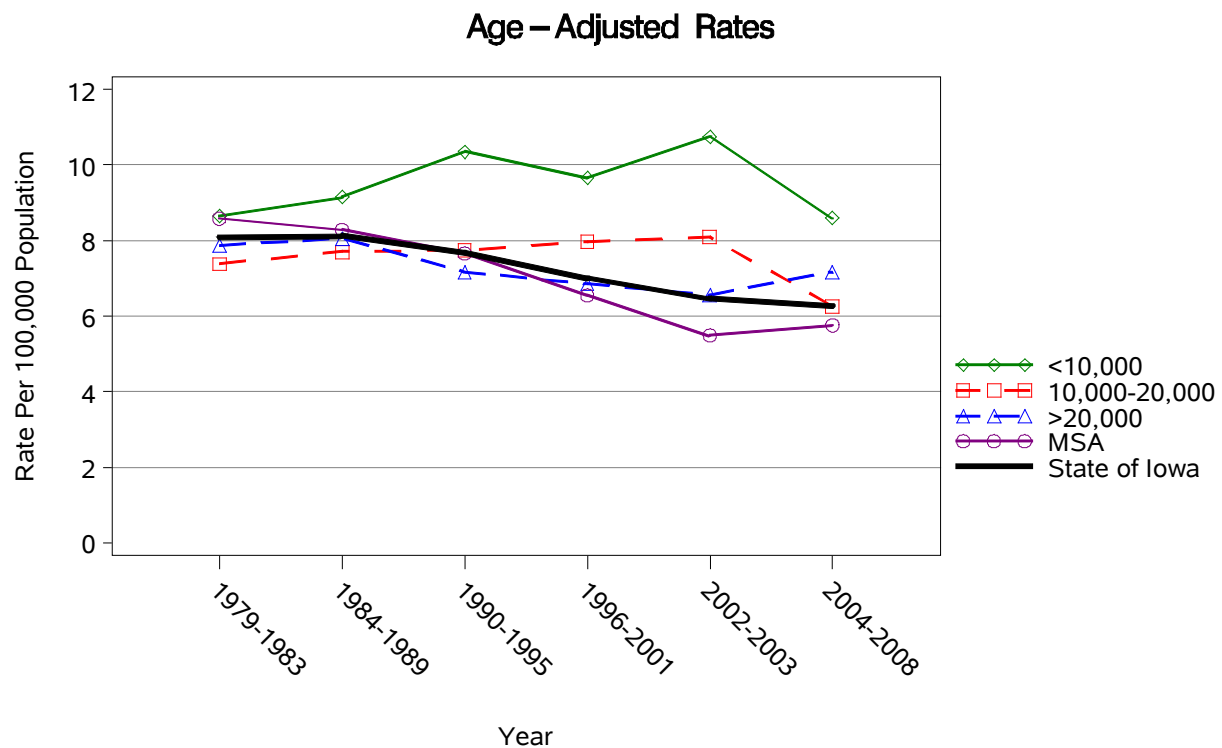
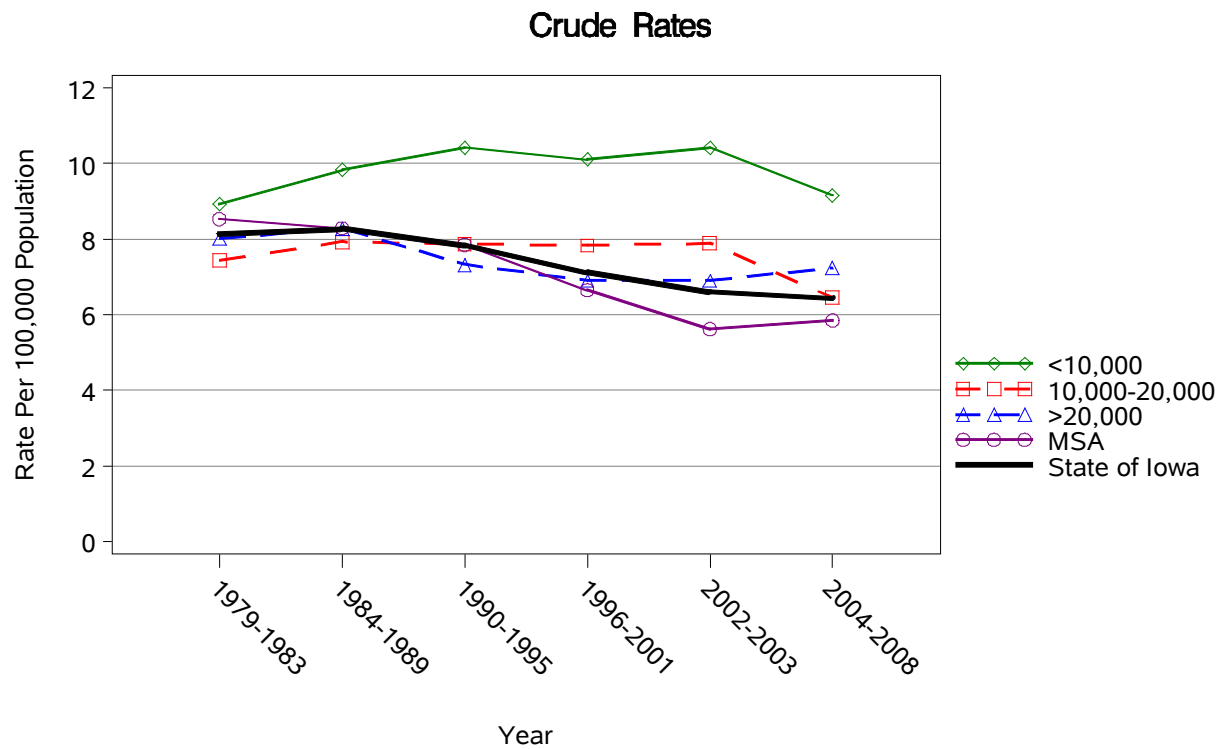
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	5	10.5	8.4
	Adams	*	*	*	Monona	7	14.9	12.6
	Audubon	5	15.9	20.3	Monroe	*	*	*
	Clarke	6	13.2	10.8	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	5	11.9	9.0	Pocahontas	5	12.8	12.5
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	9	23.5	22.6
	Humboldt	5	10.2	11.3	Wayne	5	15.5	12.8
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	<b>79</b>	<b>9.2</b>	<b>8.6</b>
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	7	7.9	6.9
	Appanoose	6	9.1	8.2	Iowa	5	6.3	6.7
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	5	9.8	11.2	Kossuth	*	*	*
	Cass	*	*	*	Louisa	7	11.8	12.1
	Cedar	5	5.6	5.6	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	6	9.7	11.5	Montgomery	5	9.0	6.4
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	8	8.9	8.6	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	6	6.8	5.8	Sac	8	15.1	16.3
	Dickinson	5	6.1	4.7	Shelby	*	*	*
	Emmet	8	15.3	14.9	Tama	*	*	*
	Floyd	6	7.3	5.7	Union	6	10.0	11.0
	Franklin	5	9.4	8.3	Winnebago	*	*	*
	Hamilton	6	7.6	7.1	Wright	7	10.5	11.9
	Hancock	*	*	*	<b>Total</b>	<b>170</b>	<b>6.5</b>	<b>6.3</b>
Counties with Average Population > 20,000	Boone	12	9.1	9.1	Lee	16	8.9	7.9
	Buchanan	8	7.7	7.4	Mahaska	6	5.4	5.4
	Carroll	7	6.7	7.3	Marion	10	6.2	5.5
	Cerro Gordo	12	5.4	5.2	Marshall	11	5.6	5.9
	Clinton	25	10.1	10.3	Muscatine	22	10.5	11.2
	Des Moines	19	9.3	9.4	Plymouth	13	10.6	11.5
	Fayette	8	7.7	7.4	Sioux	7	4.4	4.2
	Henry	*	*	*	Wapello	11	6.2	5.3
	Jackson	9	9.0	11.0	Webster	14	7.2	6.8
	Jasper	8	4.3	4.0	Winnesiek	6	5.8	5.5
					<b>Total</b>	<b>226</b>	<b>7.2</b>	<b>7.2</b>
MSA Counties	Benton	*	*	*	Linn	52	5.2	5.1
	Black Hawk	25	4.0	3.8	Madison	6	8.0	8.0
	Bremer	7	6.0	6.0	Mills	6	8.1	7.4
	Dallas	14	5.4	5.6	Polk	144	7.2	7.3
	Dubuque	22	4.8	4.6	Pottawattamie	33	7.4	7.3
	Grundy	5	8.2	7.9	Scott	52	6.5	6.6
	Guthrie	8	14.3	12.6	Story	19	4.6	5.2
	Harrison	*	*	*	Warren	15	7.0	6.6
	Johnson	21	3.5	4.0	Washington	7	6.6	5.9
	Jones	5	4.9	4.9	Woodbury	31	6.1	6.3
	<b>State Total</b>	<b>952</b>	<b>6.4</b>	<b>6.3</b>	<b>Total</b>	<b>477</b>	<b>5.9</b>	<b>5.8</b>

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

\* Represents a count less than 5

# Firearms Mortality by County Group 1979-2008



## Poisoning Mortality 2004-2008

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	<b>21</b>	<b>2.4</b>	<b>2.3</b>
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	5	8.4	8.4
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	8	14.4	16.2
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	<b>74</b>	<b>2.8</b>	<b>3.1</b>
Counties with Average Population > 20,000	Boone	*	*	*	Lee	6	3.3	3.9
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	5	3.1	3.2
	Cerro Gordo	13	5.9	5.9	Marshall	*	*	*
	Clinton	12	4.9	4.9	Muscatine	8	3.8	4.0
	Des Moines	7	3.4	3.7	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	5	2.8	3.0
	Jackson	6	6.0	6.8	Webster	10	5.2	5.6
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	<b>101</b>	<b>3.2</b>	<b>3.4</b>
MSA Counties	Benton	*	*	*	Linn	68	6.8	6.7
	Black Hawk	25	4.0	4.2	Madison	*	*	*
	Bremer	6	5.1	5.9	Mills	5	6.7	7.3
	Dallas	5	1.9	1.9	Polk	111	5.5	5.4
	Dubuque	13	2.9	2.9	Pottawattamie	20	4.5	4.7
	Grundy	*	*	*	Scott	57	7.1	7.2
	Guthrie	*	*	*	Story	9	2.2	2.4
	Harrison	*	*	*	Warren	6	2.8	3.1
	Johnson	21	3.5	3.5	Washington	5	4.7	5.5
	Jones	*	*	*	Woodbury	30	5.9	6.0
					<b>Total</b>	<b>392</b>	<b>4.8</b>	<b>4.8</b>
	<b>State Total</b>	<b>588</b>	<b>4.0</b>	<b>4.0</b>				

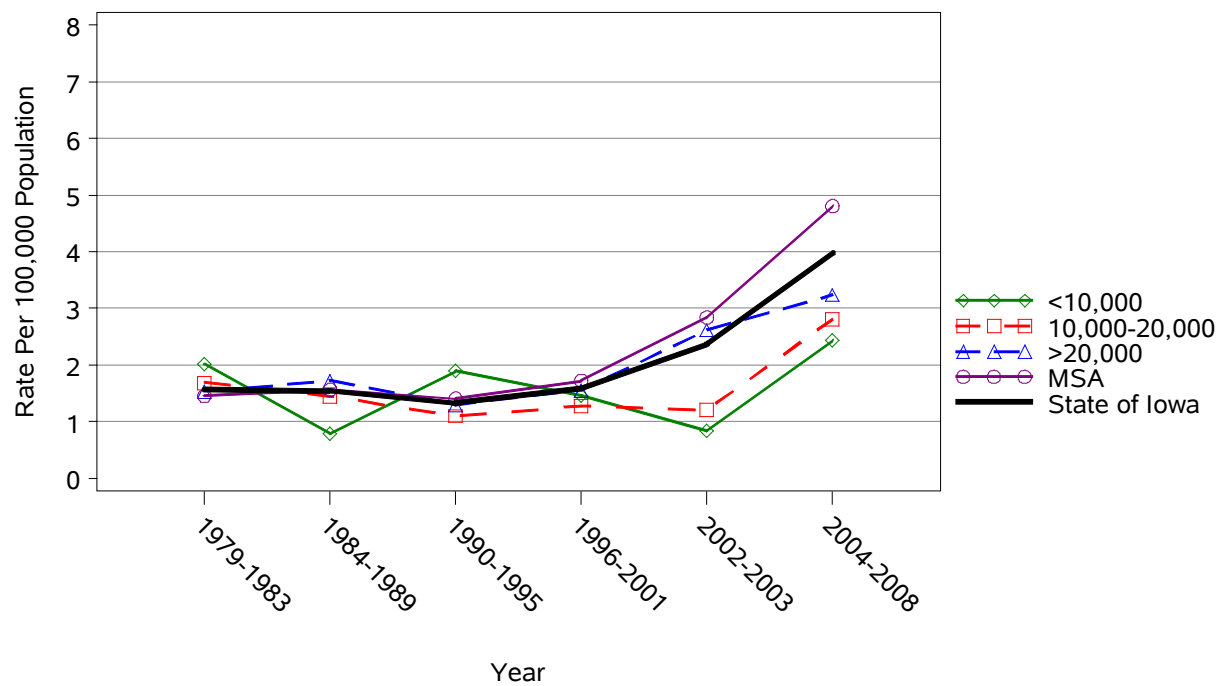
<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

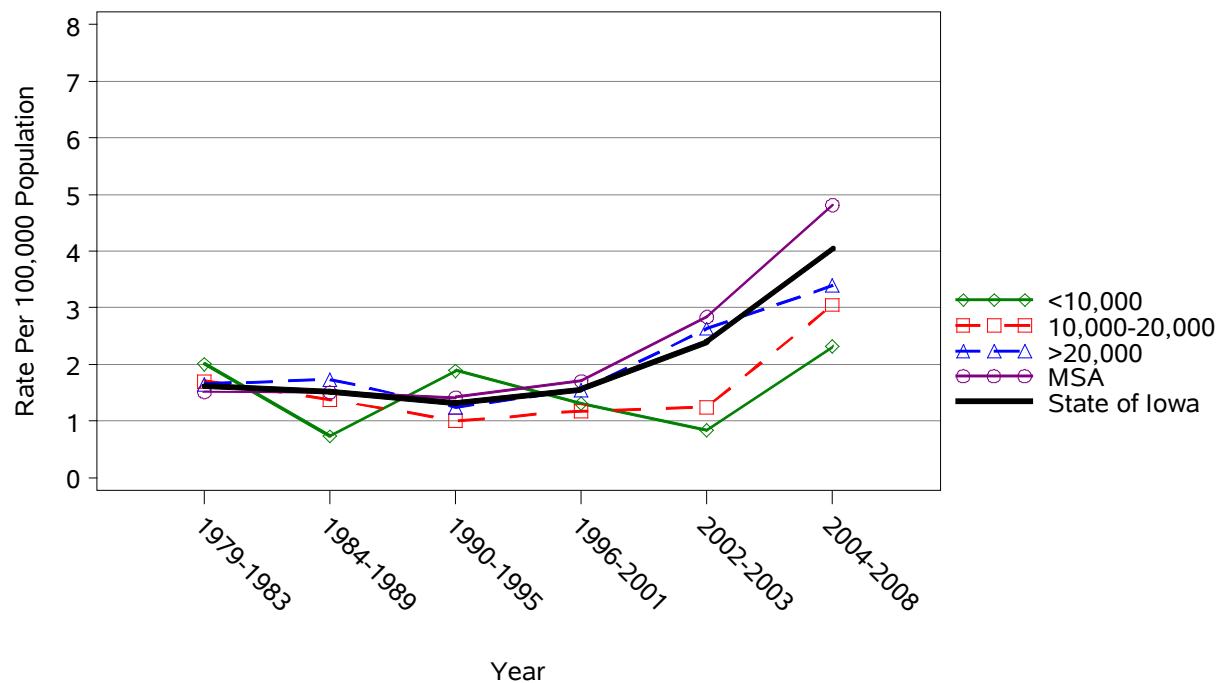
\* Represents a count less than 5

# Poisoning Mortality by County Group 1979-2008

## Crude Rates



## Age-Adjusted Rates



## Homicides 2004-2008

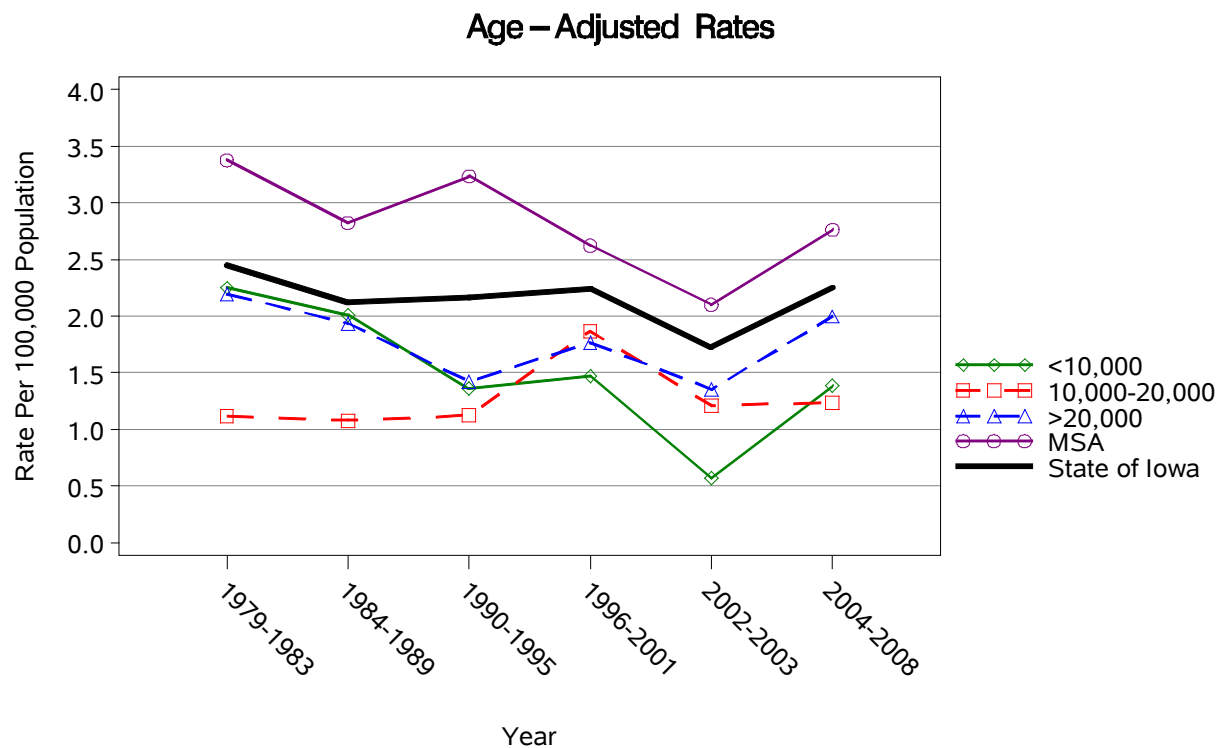
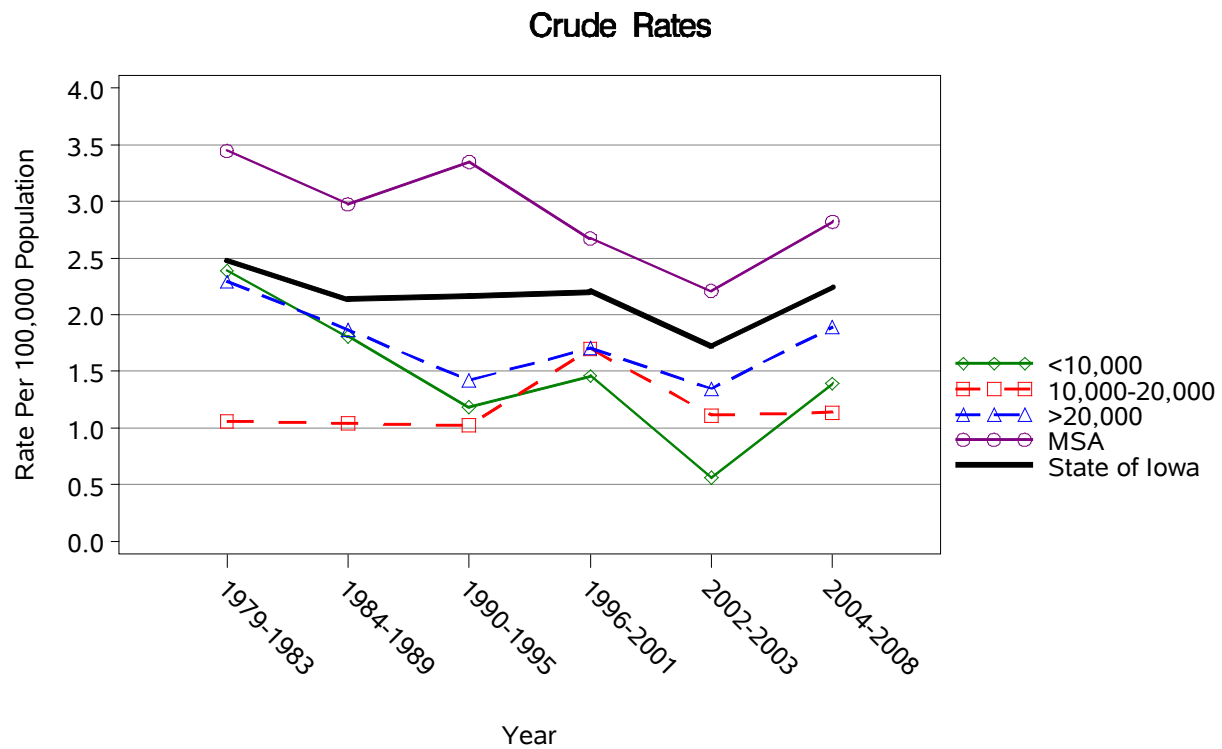
	County	#	Crude Rate <sup>1</sup>	Adjusted Rate <sup>1,2</sup>	County	#	Crude Rate <sup>1</sup>	Adjusted Rate <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	5	13.1	12.7
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	12	1.4	1.4
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	30	1.1	1.2
Counties with Average Population > 20,000	Boone	*	*	*	Lee	*	*	*
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	*	*	*
	Cerro Gordo	*	*	*	Marshall	*	*	*
	Clinton	6	2.4	2.8	Muscatine	9	4.3	4.6
	Des Moines	8	3.9	3.9	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	*	*	*
	Jackson	*	*	*	Webster	8	4.1	3.9
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	59	1.9	2.0
MSA Counties	Benton	*	*	*	Linn	18	1.8	1.8
	Black Hawk	15	2.4	2.3	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	6	2.3	2.2	Polk	84	4.2	4.1
	Dubuque	8	1.8	1.8	Pottawattamie	19	4.3	4.3
	Grundy	*	*	*	Scott	32	4.0	3.9
	Guthrie	*	*	*	Story	10	2.4	3.1
	Harrison	*	*	*	Warren	*	*	*
	Johnson	13	2.1	2.6	Washington	*	*	*
	Jones	*	*	*	Woodbury	14	2.8	2.8
					<b>Total</b>	230	2.8	2.8
	<b>State Total</b>	331	2.2	2.3				

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

\* Represents a count less than 5

# Homicides by County Group 1979-2008



## Drowning Mortality 2004-2008

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	<b>14</b>	<b>1.6</b>	<b>1.8</b>
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	<b>26</b>	<b>1.0</b>	<b>1.0</b>
Counties with Average Population > 20,000	Boone	*	*	*	Lee	*	*	*
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	*	*	*
	Cerro Gordo	*	*	*	Marshall	*	*	*
	Clinton	*	*	*	Muscatine	*	*	*
	Des Moines	*	*	*	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	*	*	*
	Jackson	*	*	*	Webster	*	*	*
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	<b>35</b>	<b>1.1</b>	<b>1.1</b>
MSA Counties	Benton	*	*	*	Linn	9	0.9	1.0
	Black Hawk	6	0.9	0.9	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	*	*	*	Polk	23	1.1	1.1
	Dubuque	6	1.3	1.2	Pottawattamie	6	1.3	1.2
	Grundy	*	*	*	Scott	8	1.0	1.1
	Guthrie	*	*	*	Story	6	1.4	1.5
	Harrison	*	*	*	Warren	*	*	*
	Johnson	*	*	*	Washington	*	*	*
	Jones	*	*	*	Woodbury	6	1.2	1.2
					<b>Total</b>	<b>84</b>	<b>1.0</b>	<b>1.0</b>
	<b>State Total</b>	<b>159</b>	<b>1.1</b>	<b>1.1</b>				

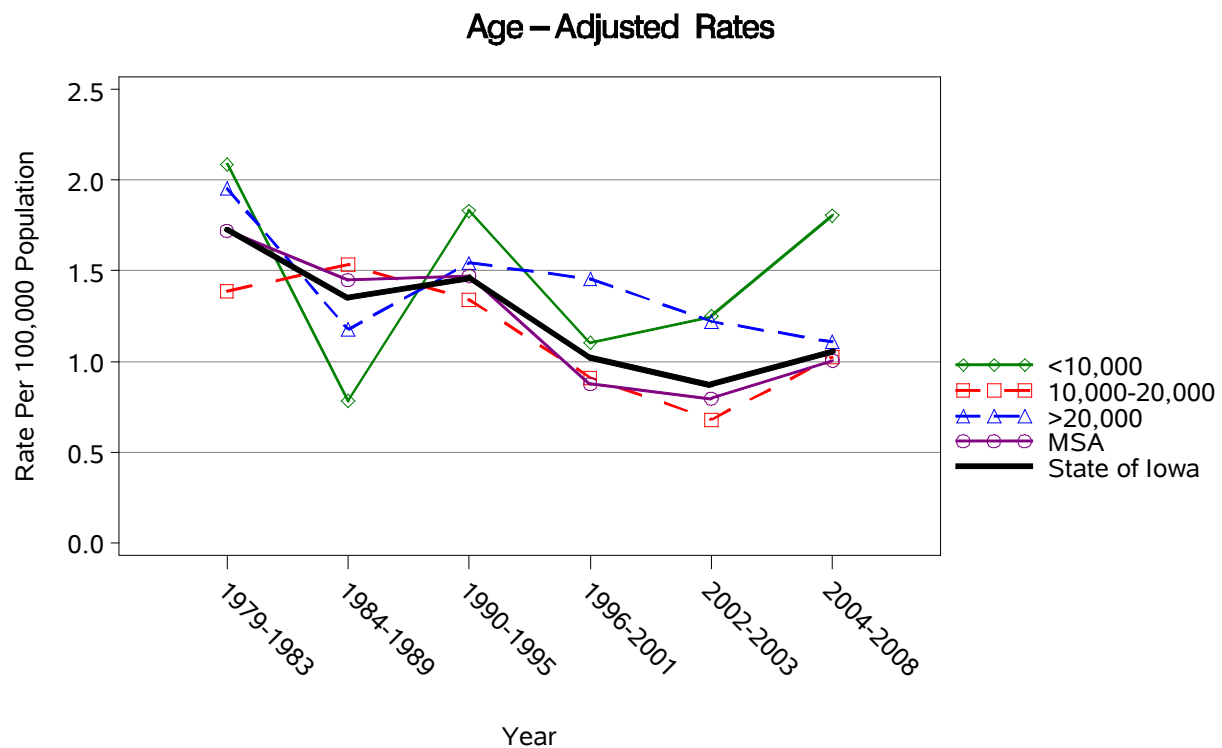
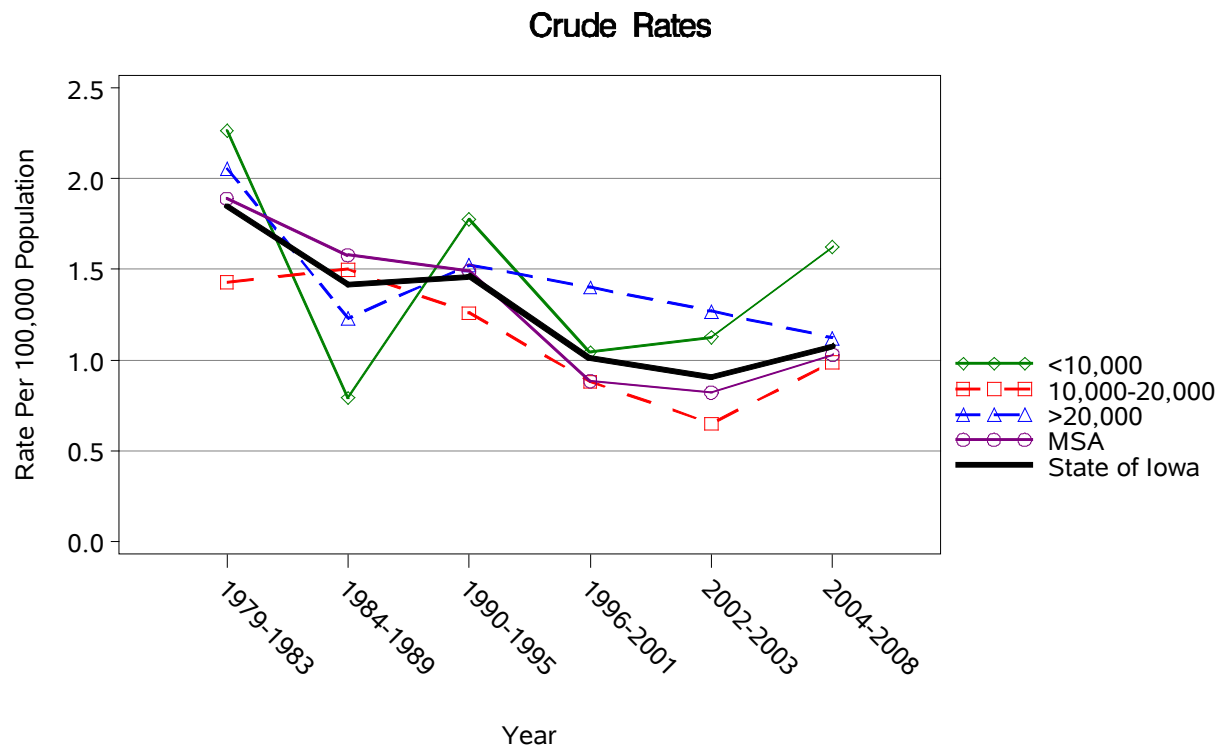
<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

\* Represents a count less than 5



# Drowning Mortality by County Group 1979-2008



## Burns Mortality 2004-2008

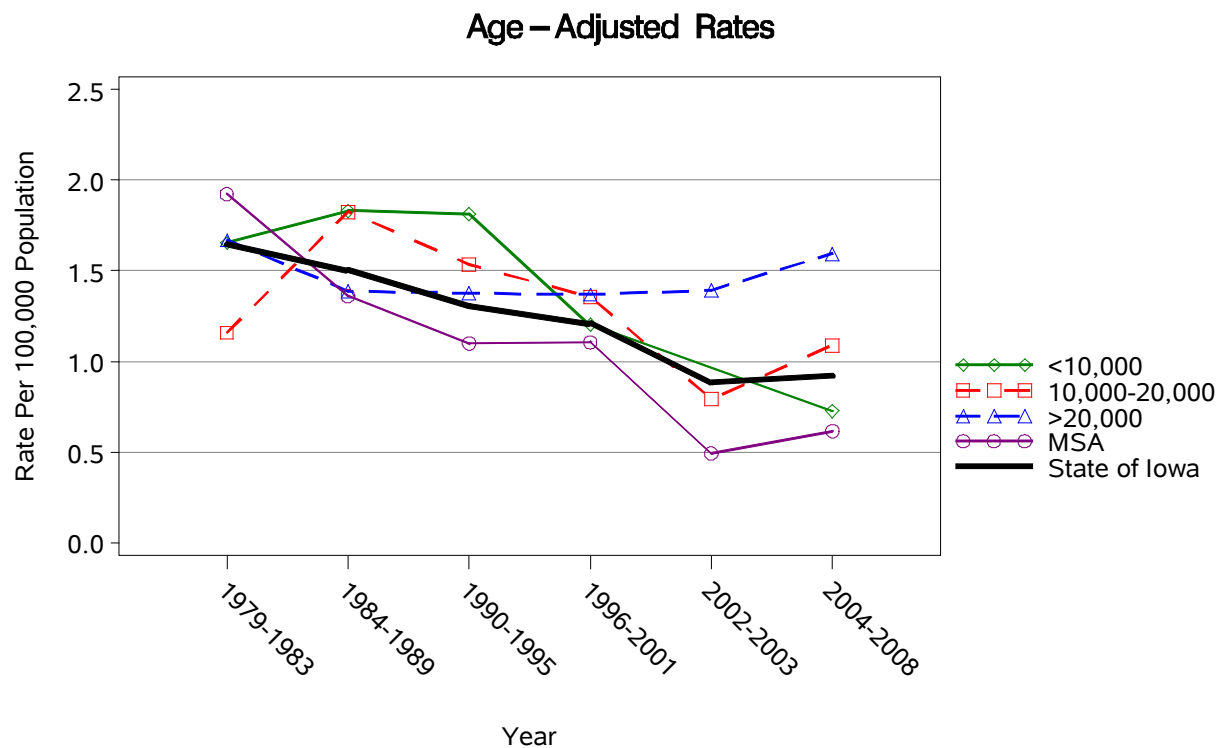
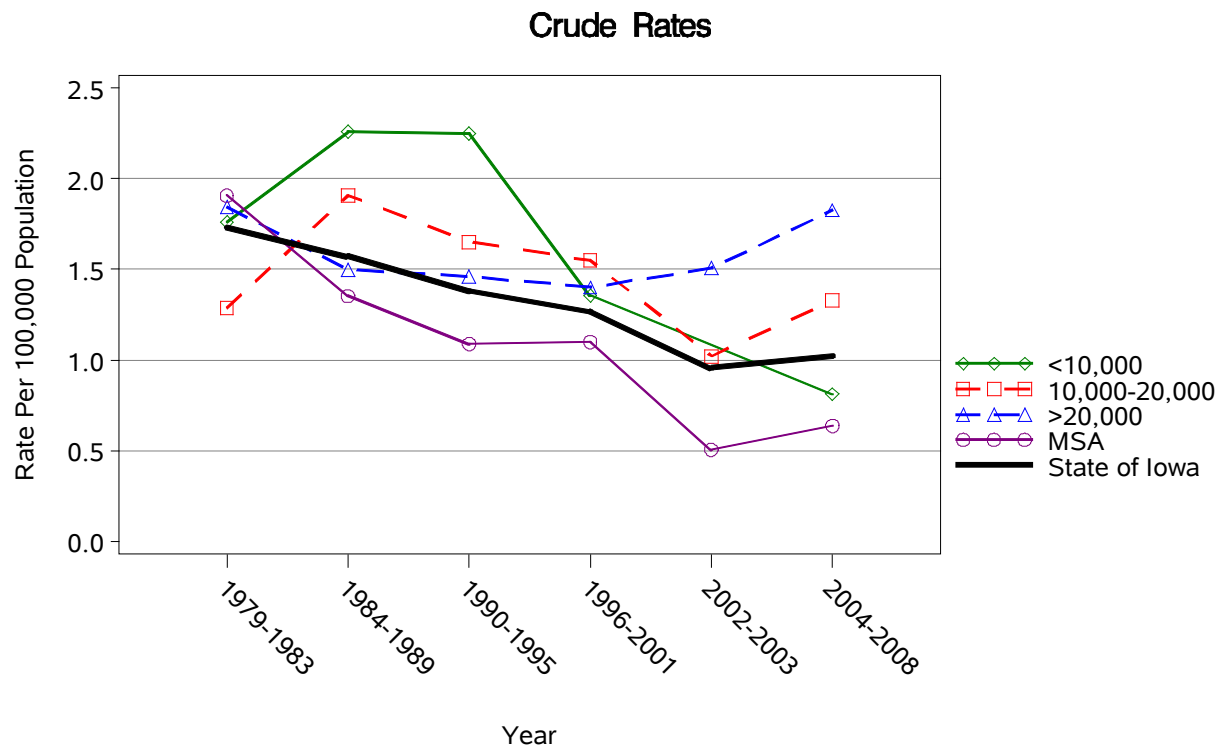
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	<b>7</b>	<b>0.8</b>	<b>0.7</b>
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	6	7.3	6.8	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	<b>35</b>	<b>1.3</b>	<b>1.1</b>
Counties with Average Population > 20,000	Boone	*	*	*	Lee	6	3.3	2.9
	Buchanan	*	*	*	Mahaska	*	*	*
	Carroll	*	*	*	Marion	*	*	*
	Cerro Gordo	7	3.2	3.0	Marshall	*	*	*
	Clinton	7	2.8	2.4	Muscatine	*	*	*
	Des Moines	*	*	*	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	*	*	*
	Henry	*	*	*	Wapello	7	3.9	3.3
	Jackson	*	*	*	Webster	*	*	*
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	<b>57</b>	<b>1.8</b>	<b>1.6</b>
MSA Counties	Benton	*	*	*	Linn	5	0.5	0.5
	Black Hawk	*	*	*	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	*	*	*	Polk	5	0.2	0.3
	Dubuque	6	1.3	1.3	Pottawattamie	*	*	*
	Grundy	*	*	*	Scott	8	1.0	1.0
	Guthrie	*	*	*	Story	*	*	*
	Harrison	*	*	*	Warren	*	*	*
	Johnson	5	0.8	1.1	Washington	*	*	*
	Jones	*	*	*	Woodbury	*	*	*
					<b>Total</b>	<b>52</b>	<b>0.6</b>	<b>0.6</b>
<b>State Total</b>		<b>151</b>	<b>1.0</b>	<b>0.9</b>				

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

\* Represents a count less than 5

# Burns Mortality by County Group 1979-2008



## All Other Unintentional Mortality 2004-2008

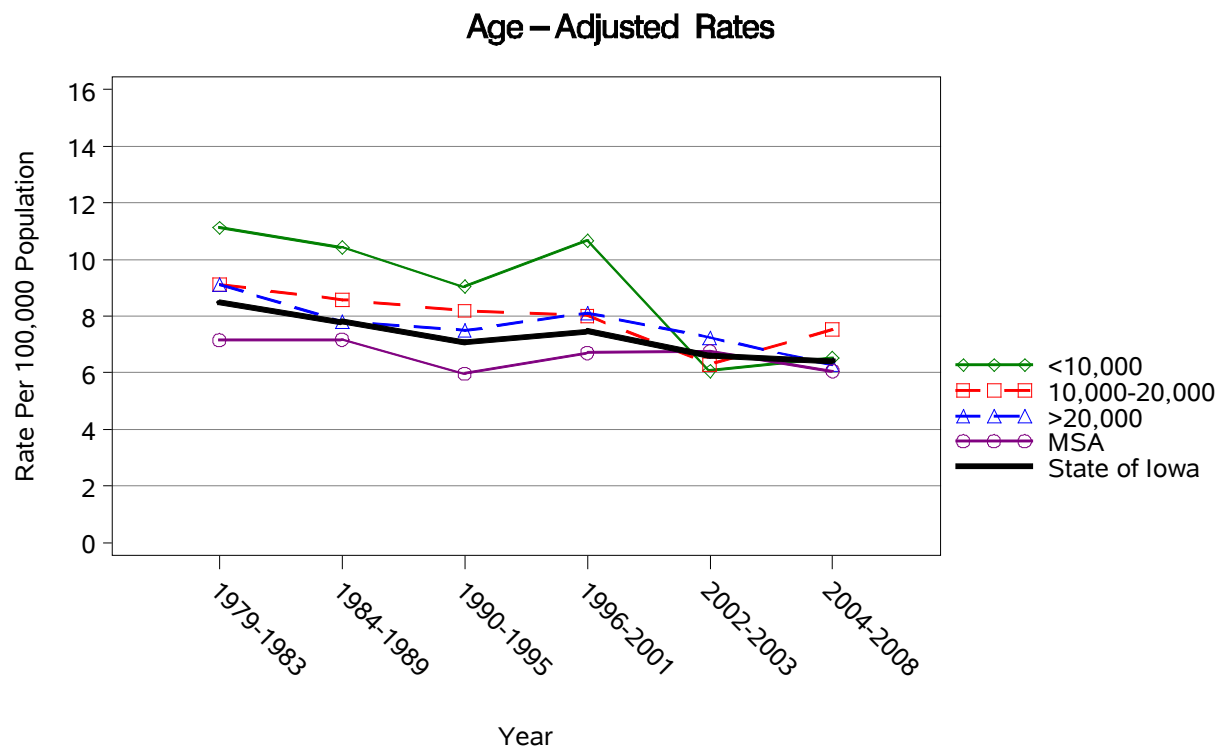
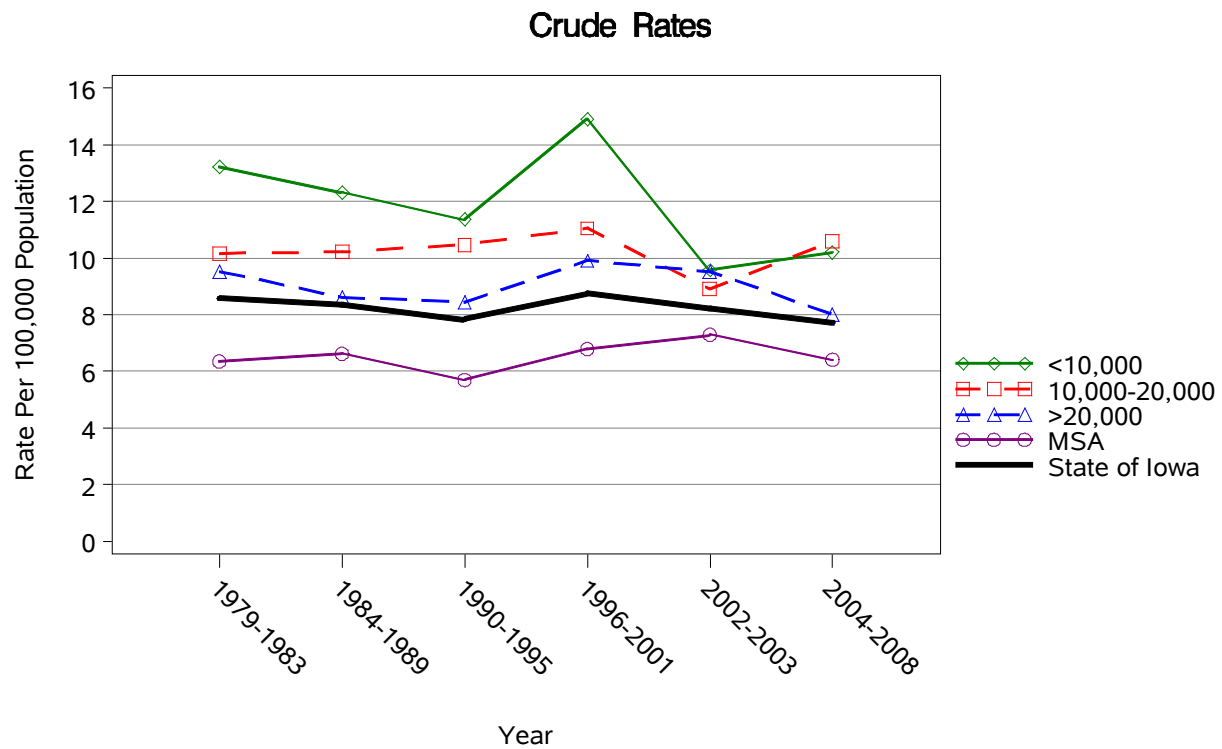
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	5	10.5	7.1
	Adams	*	*	*	Monona	10	21.3	10.4
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	5	11.0	9.6	Osceola	5	15.1	10.1
	Davis	*	*	*	Palo Alto	7	14.7	9.2
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	5	10.3	3.8	Taylor	*	*	*
	Howard	7	14.6	11.2	Van Buren	7	18.3	9.9
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	5	13.9	7.5	Worth	*	*	*
					<b>Total</b>	<b>88</b>	<b>10.2</b>	<b>6.5</b>
Counties with Average Population 10,000 – 20,000	Allamakee	14	19.4	13.8	Hardin	11	12.3	6.2
	Appanoose	10	15.1	10.2	Iowa	7	8.8	7.2
	Buena Vista	6	6.1	4.8	Jefferson	*	*	*
	Butler	9	12.2	7.9	Keokuk	6	11.0	7.2
	Calhoun	7	13.7	11.6	Kossuth	9	11.3	7.9
	Cass	6	8.6	7.0	Louisa	7	11.8	10.1
	Cedar	10	11.1	8.6	Lyon	6	10.5	6.9
	Cherokee	12	20.0	15.9	Mitchell	6	11.1	7.7
	Chickasaw	5	8.1	6.1	Montgomery	9	16.2	9.1
	Clay	17	20.2	14.1	O'Brien	6	8.4	3.9
	Clayton	8	8.9	7.3	Page	7	8.7	6.1
	Crawford	12	14.5	12.0	Poweshiek	6	6.4	4.9
	Delaware	6	6.8	5.3	Sac	5	9.5	4.5
	Dickinson	5	6.1	3.3	Shelby	7	11.2	8.1
	Emmet	6	11.5	8.1	Tama	6	6.7	4.5
	Floyd	*	*	*	Union	9	15.1	12.3
	Franklin	*	*	*	Winnebago	5	9.0	6.4
	Hamilton	10	12.6	8.7	Wright	8	12.0	8.3
	Hancock	7	12.1	8.1	<b>Total</b>	<b>279</b>	<b>10.6</b>	<b>7.5</b>
Counties with Average Population > 20,000	Boone	13	9.9	8.1	Lee	12	6.6	4.4
	Buchanan	10	9.6	7.8	Mahaska	6	5.4	5.1
	Carroll	8	7.7	5.5	Marion	11	6.8	4.9
	Cerro Gordo	22	9.9	7.1	Marshall	21	10.8	8.7
	Clinton	15	6.1	4.3	Muscatine	13	6.2	5.6
	Des Moines	14	6.9	5.1	Plymouth	16	13.1	10.0
	Fayette	8	7.7	5.8	Sioux	10	6.3	4.8
	Henry	10	9.9	9.7	Wapello	11	6.2	5.8
	Jackson	7	7.0	5.1	Webster	18	9.3	6.7
	Jasper	13	7.0	5.9	Winneshek	12	11.5	9.2
					<b>Total</b>	<b>250</b>	<b>8.0</b>	<b>6.3</b>
MSA Counties	Benton	11	8.3	7.5	Linn	86	8.6	7.9
	Black Hawk	55	8.7	7.5	Madison	8	10.7	9.0
	Bremer	*	*	*	Mills	8	10.7	10.2
	Dallas	15	5.8	7.1	Polk	111	5.5	5.5
	Dubuque	23	5.1	4.3	Pottawattamie	27	6.1	5.9
	Grundy	8	13.1	8.9	Scott	45	5.6	5.4
	Guthrie	8	14.3	10.4	Story	21	5.1	4.9
	Harrison	9	11.6	10.2	Warren	14	6.5	6.5
	Johnson	16	2.6	3.3	Washington	13	12.3	9.4
	Jones	12	11.8	9.9	Woodbury	30	5.9	5.5
					<b>Total</b>	<b>523</b>	<b>6.4</b>	<b>6.1</b>
<b>State Total</b>		<b>1,140</b>	<b>7.7</b>	<b>6.4</b>				

<sup>1</sup>Rates per 100,000 Population<sup>2</sup>Adjusted to Year 2000 Population

Source: State Health Registry of Iowa

\* Represents a count less than 5

# All Other Unintentional Mortality by County Group 1979-2008





## Youth Injury Mortality

Injuries remain the leading cause of death in persons age 1-34 years and contribute the most to years of life lost, particularly for those events of pre-adult ages. Deaths from unintentional injuries, homicides, and suicides are important public health problems in those 15-24 years of age and many of these deaths are preventable.

Transportation fatalities accounted for 121 deaths for youth aged 0-14 from 2004-2008. Of these, 79% were due to motor vehicle traffic death. In the 15-19 age range, 242 transportation deaths occurred over this same period with 97% accounted for by motor vehicle traffic deaths. Over time the transportation mortality rates have been higher in more rural counties for both age groups. For 15-19 year-olds during 2004 through 2008, the mortality rate in the most rural of counties was almost double that of the state rate. Tables other than transportation are not presented due to the small number of events in both age ranges.

### HIGHLIGHTS...

- ✓ Unintentional injuries, homicides, and suicides are important public health problems in those 15-24 years of age.
- ✓ Injuries contribute the most to years of life lost.
- ✓ Motor vehicle deaths accounted for 97% of all transportation deaths in youth aged 15-19 in Iowa.

The cause of death data are obtained from death certificates filed at the Iowa Department of Public Health. Analysis was done by the State Health Registry of Iowa at the University of Iowa. Crude and age-adjusted rates for ages 15-19 are identical to one another because only one age group in the age-adjustment analysis is represented. The crude and age-adjusted rates for the 0-14 age group show only slight differences as this represents four age groups (<1, 1-4, 5-9, and 10-14) in the age-adjustment analysis. We therefore display only crude rates in the tables and graphs.

## Age 0-14: All Transportation Mortality 2004-2008

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monona	*	*
	Audubon	*	*	Monroe	*	*
	Clarke	*	*	Osceola	*	*
	Davis	*	*	Palo Alto	*	*
	Decatur	*	*	Pocahontas	*	*
	Fremont	*	*	Ringgold	*	*
	Greene	*	*	Taylor	*	*
	Howard	*	*	Van Buren	*	*
	Humboldt	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				<b>Total</b>	9	5.5
Counties with Average Population 10,000 - 20,000	Allamakee	*	*	Hardin	*	*
	Appanoose	*	*	Iowa	*	*
	Buena Vista	*	*	Jefferson	*	*
	Butler	*	*	Keokuk	*	*
	Calhoun	*	*	Kossuth	*	*
	Cass	*	*	Louisa	*	*
	Cedar	*	*	Lyon	*	*
	Cherokee	*	*	Mitchell	*	*
	Chickasaw	*	*	Montgomery	*	*
	Clay	*	*	O'Brien	*	*
	Clayton	*	*	Page	*	*
	Crawford	*	*	Poweshiek	*	*
	Delaware	*	*	Sac	*	*
	Dickinson	*	*	Shelby	*	*
	Emmet	*	*	Tama	*	*
	Floyd	*	*	Union	*	*
	Franklin	*	*	Winnebago	*	*
	Hamilton	*	*	Wright	*	*
	Hancock	*	*	<b>Total</b>	34	6.7
Counties with Average Population > 20,000	Boone	*	*	Lee	*	*
	Buchanan	*	*	Mahaska	*	*
	Carroll	*	*	Marion	*	*
	Cerro Gordo	*	*	Marshall	*	*
	Clinton	*	*	Muscatine	*	*
	Des Moines	*	*	Plymouth	*	*
	Fayette	*	*	Sioux	*	*
	Henry	*	*	Wapello	*	*
	Jackson	*	*	Webster	5	13.6
	Jasper	*	*	Winneshiek	*	*
				<b>Total</b>	30	4.9
MSA Counties	Benton	*	*	Linn	5	2.4
	Black Hawk	5	4.3	Madison	*	*
	Bremer	*	*	Mills	*	*
	Dallas	*	*	Polk	15	3.5
	Dubuque	*	*	Pottawattamie	*	*
	Grundy	*	*	Scott	*	*
	Guthrie	*	*	Story	*	*
	Harrison	*	*	Warren	*	*
	Johnson	*	*	Washington	*	*
	Jones	*	*	Woodbury	6	5.2
				<b>Total</b>	48	2.9
<b>State Total</b>		121	4.1			

<sup>1</sup> Rates per 100,000 Population

Source: State Health Registry of Iowa

\* Represents a count less than 5

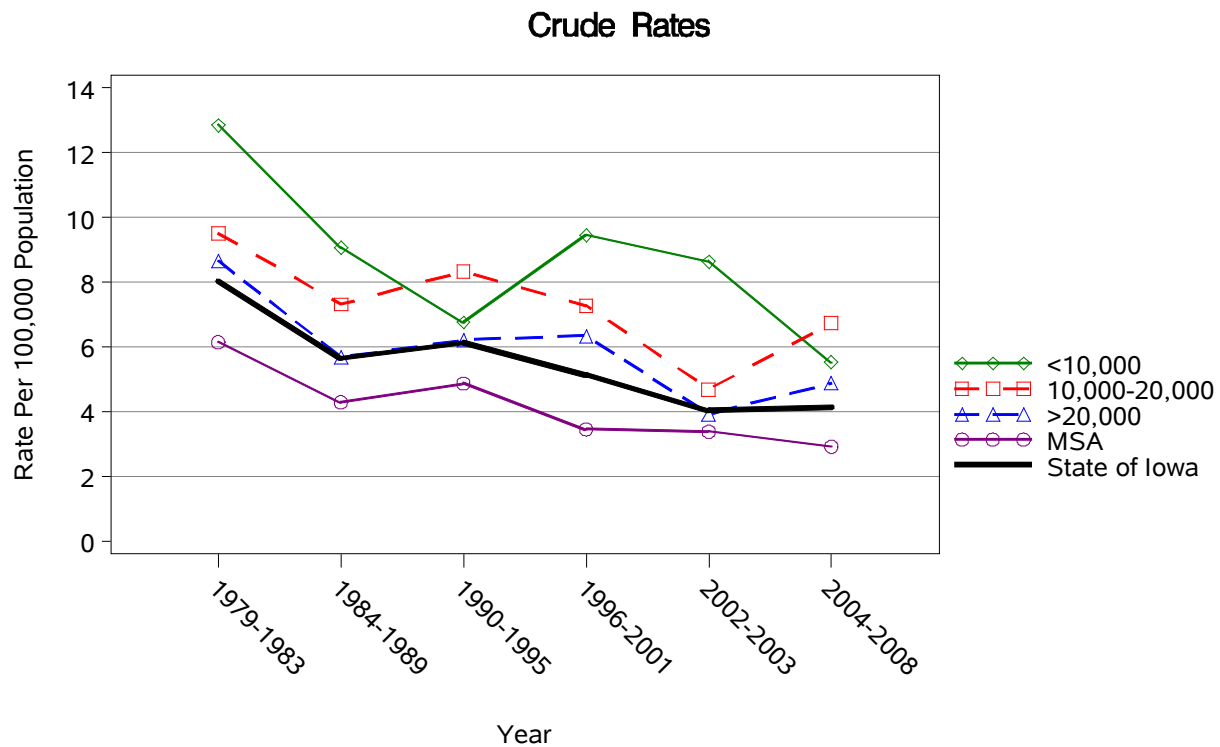


## Age 15-19: All Transportation Mortality 2004-2008

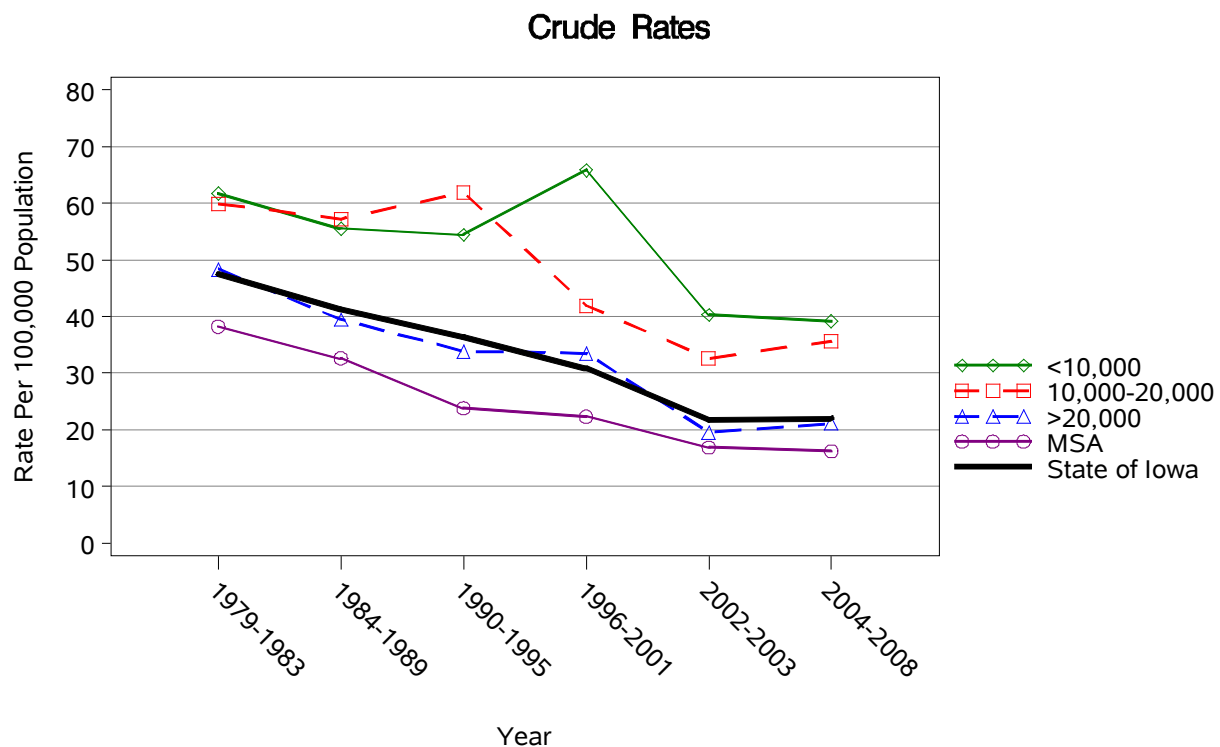
	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monona	*	*
	Audubon	*	*	Monroe	*	*
	Clarke	*	*	Osceola	*	*
	Davis	*	*	Palo Alto	*	*
	Decatur	*	*	Pocahontas	*	*
	Fremont	*	*	Ringgold	*	*
	Greene	*	*	Taylor	*	*
	Howard	*	*	Van Buren	*	*
	Humboldt	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				<b>Total</b>	25	39.1
Counties with Average Population 10,000 - 20,000	Allamakee	*	*	Hardin	*	*
	Appanoose	*	*	Iowa	5	90.1
	Buena Vista	*	*	Jefferson	*	*
	Butler	*	*	Keokuk	*	*
	Calhoun	*	*	Kossuth	*	*
	Cass	*	*	Louisa	*	*
	Cedar	*	*	Lyon	*	*
	Cherokee	*	*	Mitchell	*	*
	Chickasaw	*	*	Montgomery	*	*
	Clay	*	*	O'Brien	*	*
	Clayton	*	*	Page	*	*
	Crawford	*	*	Poweshiek	*	*
	Delaware	*	*	Sac	6	160.1
	Dickinson	*	*	Shelby	*	*
	Emmet	*	*	Tama	*	*
	Floyd	*	*	Union	*	*
	Franklin	*	*	Winnebago	*	*
	Hamilton	*	*	Wright	*	*
	Hancock	*	*	<b>Total</b>	70	35.7
Counties with Average Population > 20,000	Boone	*	*	Lee	*	*
	Buchanan	*	*	Mahaska	*	*
	Carroll	8	99.6	Marion	*	*
	Cerro Gordo	6	39.4	Marshall	*	*
	Clinton	*	*	Muscatine	*	*
	Des Moines	*	*	Plymouth	*	*
	Fayette	*	*	Sioux	*	*
	Henry	*	*	Wapello	*	*
	Jackson	*	*	Webster	5	32.5
	Jasper	*	*	Winneshiek	*	*
				<b>Total</b>	49	21.2
MSA Counties	Benton	*	*	Linn	9	13.7
	Black Hawk	*	*	Madison	*	*
	Bremer	*	*	Mills	*	*
	Dallas	*	*	Polk	24	18.9
	Dubuque	7	20.0	Pottawattamie	9	28.4
	Grundy	*	*	Scott	7	12.3
	Guthrie	*	*	Story	*	*
	Harrison	*	*	Warren	7	40.5
	Johnson	5	8.5	Washington	*	*
	Jones	*	*	Woodbury	8	21.4
				<b>Total</b>	98	16.2
<b>State Total</b>		242	22.1			

<sup>1</sup> Rates per 100,000 PopulationSource: State Health Registry of Iowa  
\* Represents a count less than 5

## Age 0-14: All Transportation Mortality by County Group 1979-2008



## Age 15-19: All Transportation Mortality by County Group 1979-2008



# Age 0-14: Motor Vehicle Traffic Mortality 2004-2008

	County	#	Crude <sup>1</sup>	County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	*	*	Lucas	*	*
	Adams	*	*	Monona	*	*
	Audubon	*	*	Monroe	*	*
	Clarke	*	*	Osceola	*	*
	Davis	*	*	Palo Alto	*	*
	Decatur	*	*	Pocahontas	*	*
	Fremont	*	*	Ringgold	*	*
	Greene	*	*	Taylor	*	*
	Howard	*	*	Van Buren	*	*
	Humboldt	*	*	Wayne	*	*
	Ida	*	*	Worth	*	*
				<b>Total</b>	9	5.5
Counties with Average Population 10,000 - 20,000	Allamakee	*	*	Hardin	*	*
	Appanoose	*	*	Iowa	*	*
	Buena Vista	*	*	Jefferson	*	*
	Butler	*	*	Keokuk	*	*
	Calhoun	*	*	Kossuth	*	*
	Cass	*	*	Louisa	*	*
	Cedar	*	*	Lyon	*	*
	Cherokee	*	*	Mitchell	*	*
	Chickasaw	*	*	Montgomery	*	*
	Clay	*	*	O'Brien	*	*
	Clayton	*	*	Page	*	*
	Crawford	*	*	Poweshiek	*	*
	Delaware	*	*	Sac	*	*
	Dickinson	*	*	Shelby	*	*
	Emmet	*	*	Tama	*	*
	Floyd	*	*	Union	*	*
	Franklin	*	*	Winnebago	*	*
	Hamilton	*	*	Wright	*	*
	Hancock	*	*	<b>Total</b>	26	5.2
Counties with Average Population > 20,000	Boone	*	*	Lee	*	*
	Buchanan	*	*	Mahaska	*	*
	Carroll	*	*	Marion	*	*
	Cerro Gordo	*	*	Marshall	*	*
	Clinton	*	*	Muscatine	*	*
	Des Moines	*	*	Plymouth	*	*
	Fayette	*	*	Sioux	*	*
	Henry	*	*	Wapello	*	*
	Jackson	*	*	Webster	*	*
	Jasper	*	*	Winneshiek	*	*
				<b>Total</b>	22	3.6
MSA Counties	Benton	*	*	Linn	*	*
	Black Hawk	5	4.3	Madison	*	*
	Bremer	*	*	Mills	*	*
	Dallas	*	*	Polk	12	2.8
	Dubuque	*	*	Pottawattamie	*	*
	Grundy	*	*	Scott	*	*
	Guthrie	*	*	Story	*	*
	Harrison	*	*	Warren	*	*
	Johnson	*	*	Washington	*	*
	Jones	*	*	Woodbury	5	4.3
				<b>Total</b>	39	2.4
<b>State Total</b>		96	3.3			

<sup>1</sup> Rates per 100,000 PopulationSource: State Health Registry of Iowa  
\* Represents a count less than 5

## Age 15-19: Motor Vehicle Traffic Mortality 2004-2008

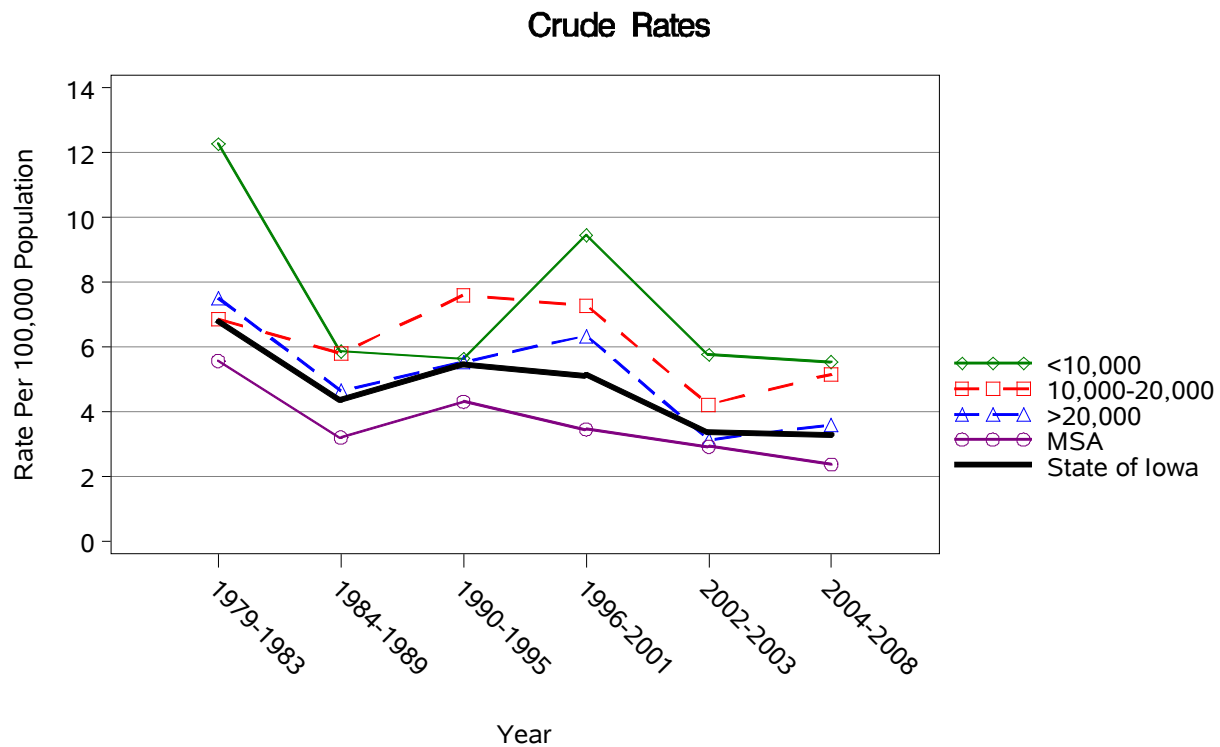
	County	#	Crude <sup>1</sup>		County	#	Crude <sup>1</sup>
Counties with Average Population < 10,000	Adair	*	*		Lucas	*	*
	Adams	*	*		Monona	*	*
	Audubon	*	*		Monroe	*	*
	Clarke	*	*		Osceola	*	*
	Davis	*	*		Palo Alto	*	*
	Decatur	*	*		Pocahontas	*	*
	Fremont	*	*		Ringgold	*	*
	Greene	*	*		Taylor	*	*
	Howard	*	*		Van Buren	*	*
	Humboldt	*	*		Wayne	*	*
	Ida	*	*		Worth	*	*
					<b>Total</b>	22	34.4
Counties with Average Population 10,000 - 20,000	Allamakee	*	*		Hardin	*	*
	Appanoose	*	*		Iowa	5	90.1
	Buena Vista	*	*		Jefferson	*	*
	Butler	*	*		Keokuk	*	*
	Calhoun	*	*		Kossuth	*	*
	Cass	*	*		Louisa	*	*
	Cedar	*	*		Lyon	*	*
	Cherokee	*	*		Mitchell	*	*
	Chickasaw	*	*		Montgomery	*	*
	Clay	*	*		O'Brien	*	*
	Clayton	*	*		Page	*	*
	Crawford	*	*		Poweshiek	*	*
	Delaware	*	*		Sac	6	160.1
	Dickinson	*	*		Shelby	*	*
	Emmet	*	*		Tama	*	*
	Floyd	*	*		Union	*	*
	Franklin	*	*		Winnebago	*	*
	Hamilton	*	*		Wright	*	*
	Hancock	*	*		<b>Total</b>	68	34.7
Counties with Average Population > 20,000	Boone	*	*		Lee	*	*
	Buchanan	*	*		Mahaska	*	*
	Carroll	8	99.6		Marion	*	*
	Cerro Gordo	6	39.4		Marshall	*	*
	Clinton	*	*		Muscatine	*	*
	Des Moines	*	*		Plymouth	*	*
	Fayette	*	*		Sioux	*	*
	Henry	*	*		Wapello	*	*
	Jackson	*	*		Webster	5	32.5
	Jasper	*	*		Winneshiek	*	*
					<b>Total</b>	48	20.7
MSA Counties	Benton	*	*		Linn	8	12.2
	Black Hawk	*	*		Madison	*	*
	Bremer	*	*		Mills	*	*
	Dallas	*	*		Polk	24	18.9
	Dubuque	7	20.0		Pottawattamie	9	28.4
	Grundy	*	*		Scott	7	12.3
	Guthrie	*	*		Story	*	*
	Harrison	*	*		Warren	7	40.5
	Johnson	5	8.5		Washington	*	*
	Jones	*	*		Woodbury	7	18.7
					<b>Total</b>	96	15.9
<b>State Total</b>		234	21.4				

<sup>1</sup> Rates per 100,000 Population

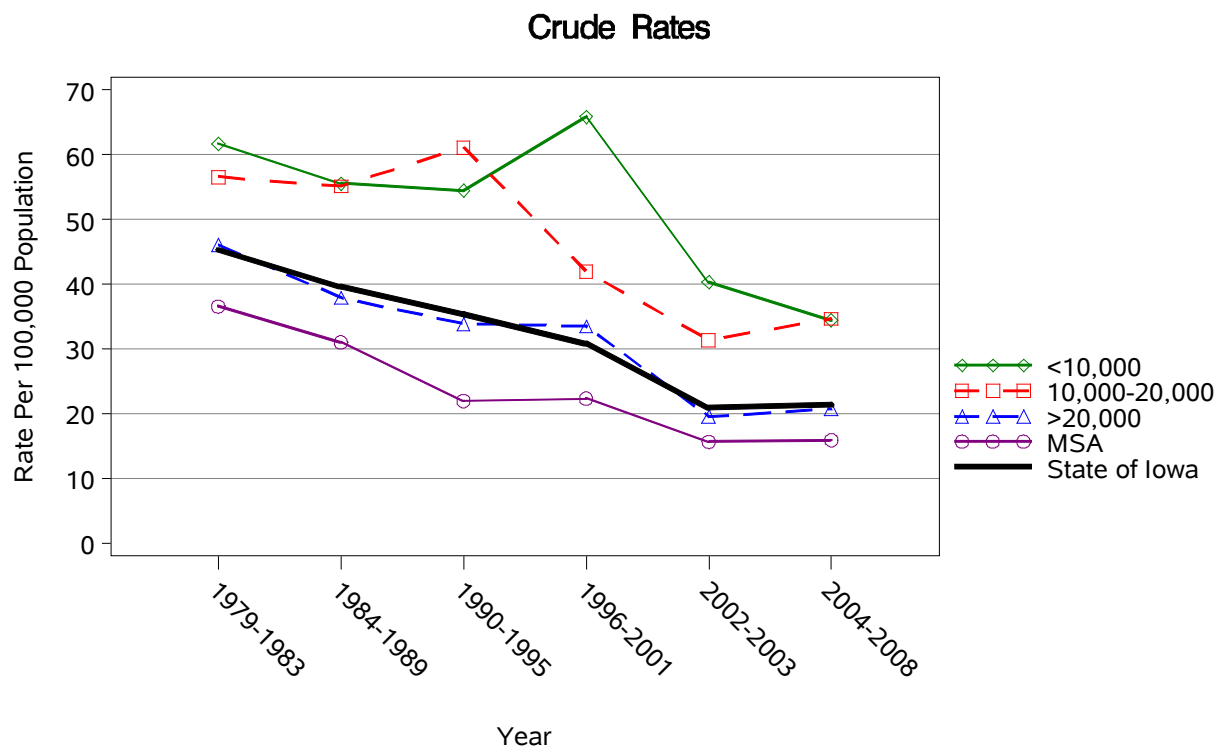
Source: State Health Registry of Iowa

\* Represents a count less than 5

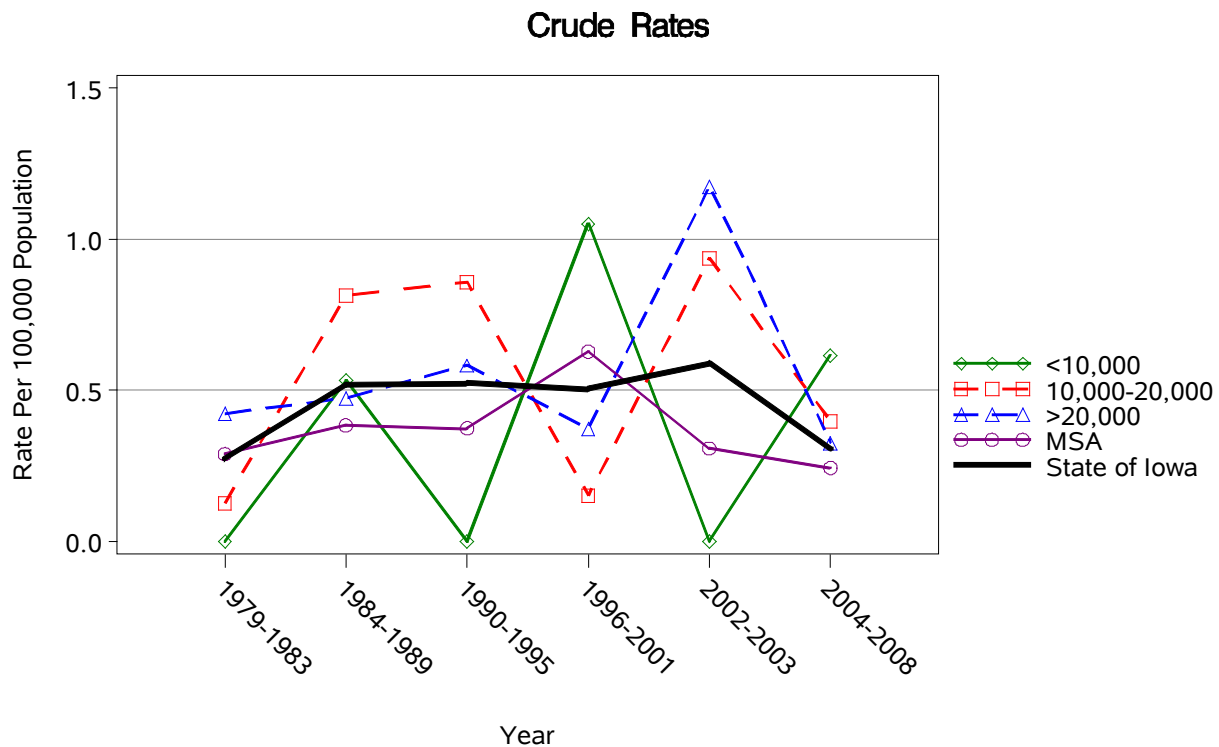
## Age 0-14: Motor Vehicle Traffic Mortality by County Group 1979-2008



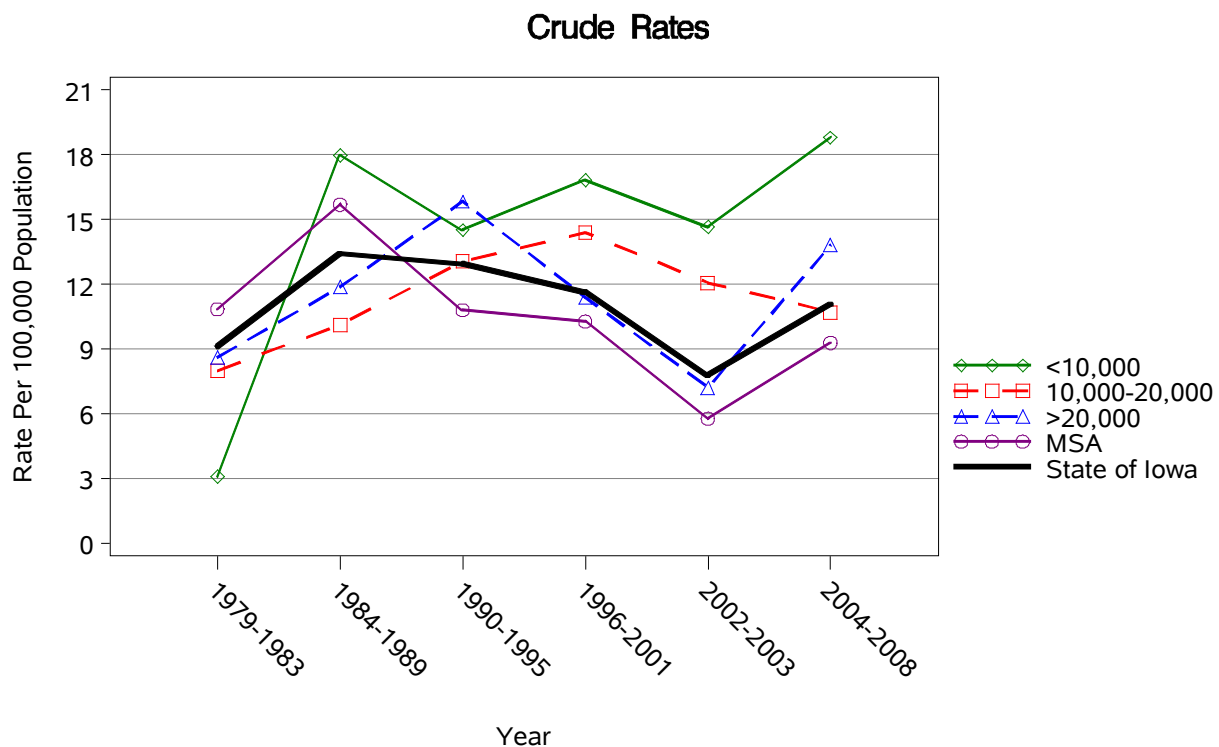
## Age 15-19: Motor Vehicle Traffic Mortality by County Group 1979-2008



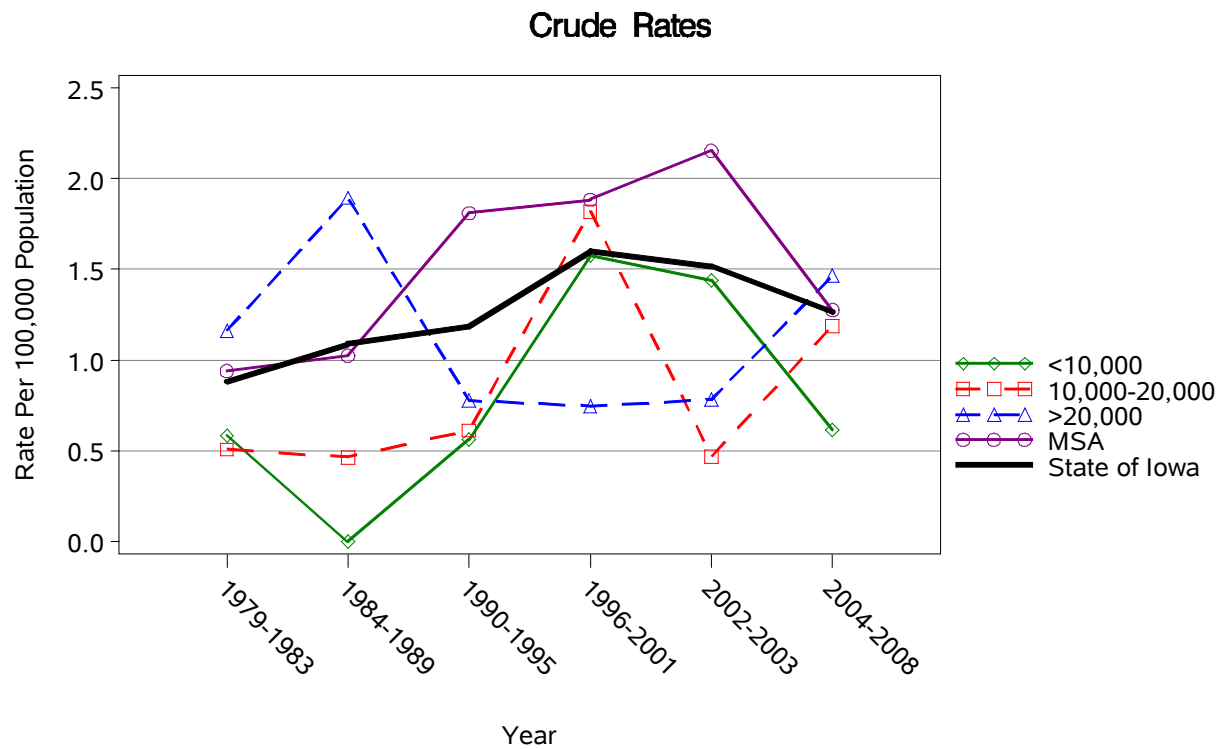
## Age 0-14: Suicides by County Group 1979-2008



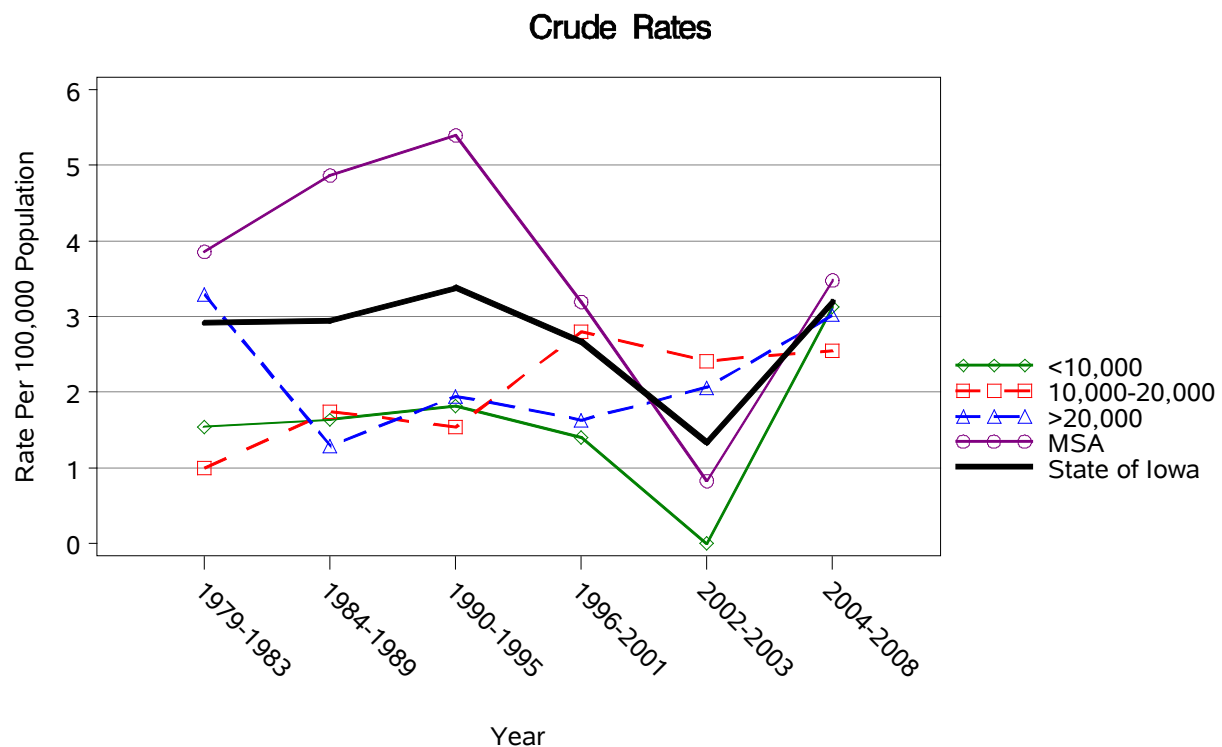
## Age 15-19: Suicides by County Group 1979-2008



## Age 0-14: Homicides by County Group 1979-2008



## Age 15-19: Homicides by County Group 1979-2008







## Other Mortality

With the population aging, chronic disease has become a major determinant of the health of Iowans and the need for health care services in the state.

Heart disease, still the number one cause of death in Iowa from 2004-2008, accounted for 242 deaths per 100,000 persons (crude rate). Age-adjusted rates for heart disease across the four county groupings (based on county size) do not vary much, and are declining. In the 1976 to 1979 period, the state age-adjusted mortality rate was 381 per 100,000, dropping steadily to 184 per 100,000 by the 2004-2008 period. This represents a 52% decline.

Stroke is currently the third leading cause of death in Iowa, with a crude mortality rate of 60 per 100,000 between 2004 and 2008. From 1976 through 2008, Iowa experienced a decline in age-adjusted stroke mortality, similar to what was observed for heart disease, with a 57% decline when comparing the 1976-1979 time period to the most recent time period. The age-adjusted mortality rates for chronic obstructive pulmonary disease, the fourth leading cause of death, have been increasing across time with the higher population density county groupings experiencing the highest rates in 2004-2008. The fifth leading cause, accidents and adverse effects, includes motor vehicle collisions. Death from Alzheimer's, the sixth leading cause of death, has shown increasing crude and age-adjusted mortality rates statewide since the 1976-1979 period. Crude rates are highest in the smaller counties, due to their larger proportion of elderly. The smaller population counties are also exhibiting a greater problem with mortality due to diabetes and pneumonia/influenza, based upon crude mortality rates, which when compared to the age-adjusted rates, indicate this is primarily due to their larger proportion of elderly. Since the mid-1980s diabetes mortality has been increasing in all county groupings over time consistent with the obesity epidemic seen in Iowa.

These data were obtained from death certificates filed at the Iowa Department of Public Health via the National Center for Health Statistics and the SEER\*Stat (version 7.0.4) software program provided by the National Cancer Institute.

### MAJOR CAUSES OF DEATH IN IOWA...

- ✓ Heart disease
- ✓ Cancer
- ✓ Stroke
- ✓ Chronic obstructive pulmonary disease
- ✓ Accidents and adverse effects
- ✓ Alzheimer's disease
- ✓ Pneumonia/influenza
- ✓ Diabetes
- ✓ Infectious/parasitic diseases
- ✓ Suicide

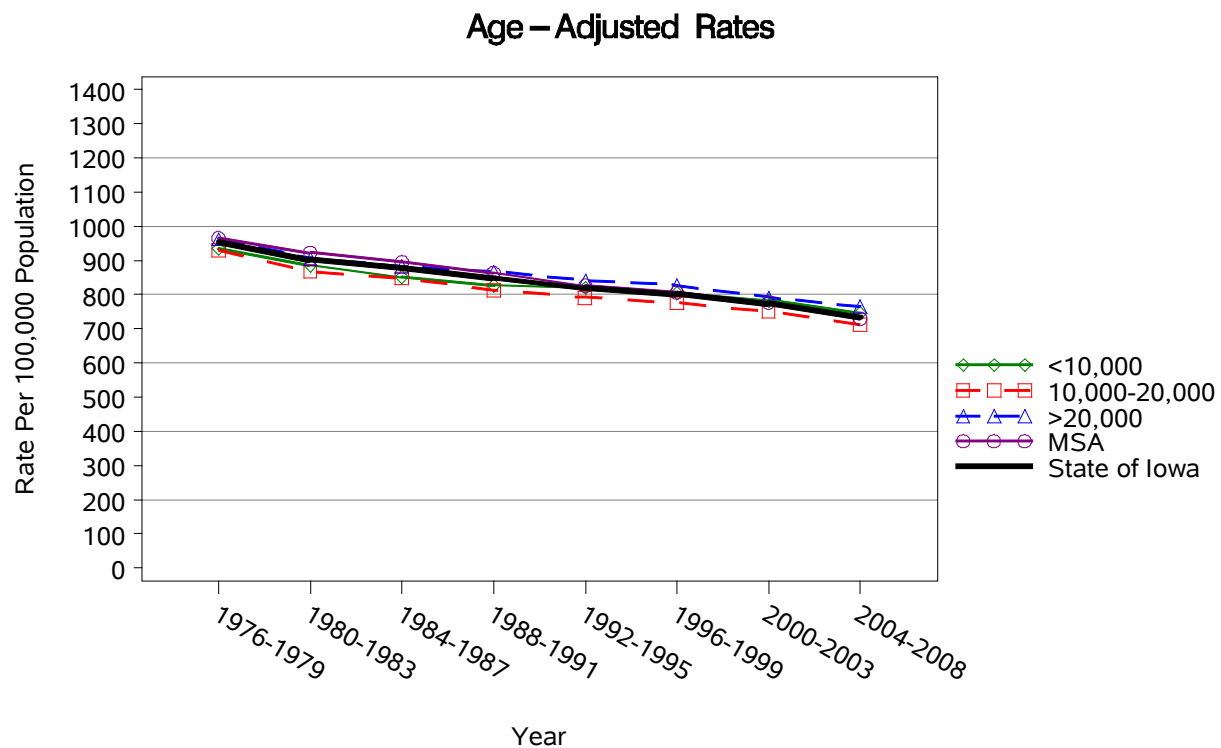
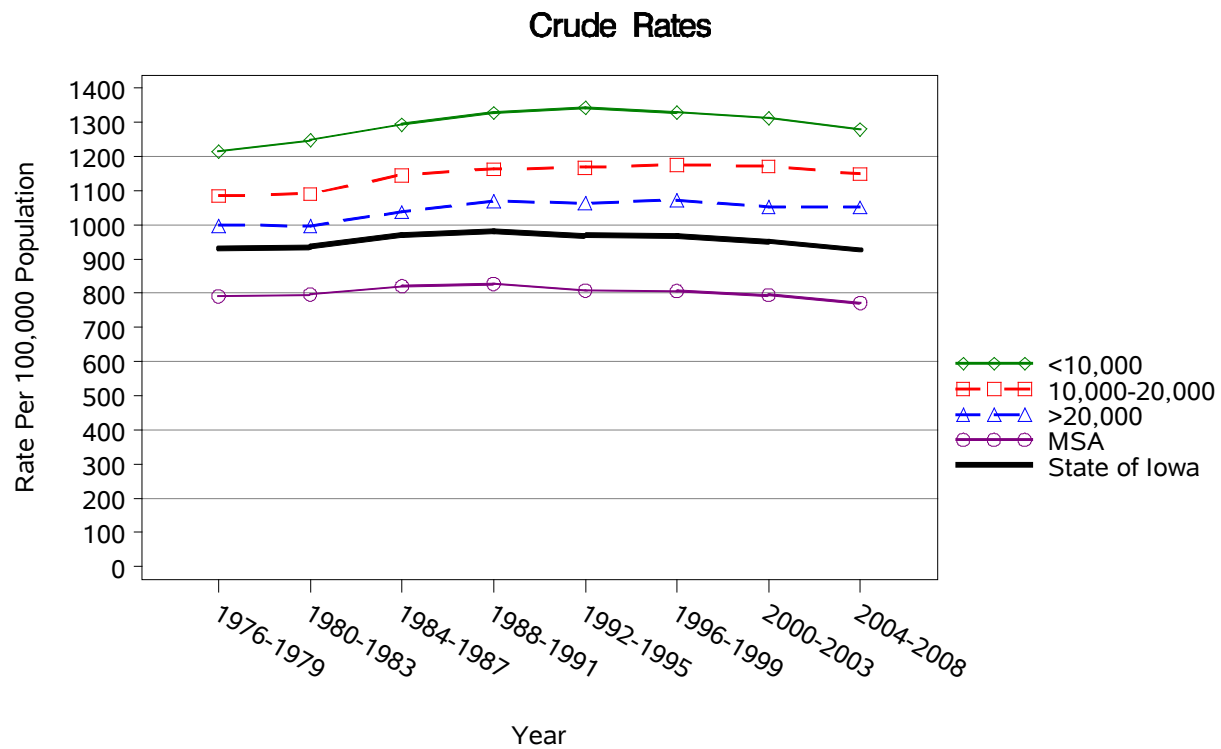
## All Causes Mortality 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	564	1473.6 (04)	770.5 (26)	Lucas	544	1145.5 (45)	755.9 (33)
	Adams	257	1242.3 (22)	716.2 (61)	Monona	792	1713.5 (01)	855.4 (05)
	Audubon	437	1407.6 (08)	716.4 (60)	Monroe	475	1240.3 (23)	791.2 (21)
	Clarke	525	1154.5 (43)	827.2 (11)	Osceola	401	1220.8 (25)	783.0 (23)
	Davis	437	1022.5 (69)	724.2 (52)	Palo Alto	636	1342.0 (14)	738.0 (43)
	Decatur	457	1092.5 (56)	744.4 (38)	Pocahontas	543	1410.6 (07)	750.6 (36)
	Fremont	429	1138.0 (48)	689.9 (78)	Ringgold	388	1514.9 (03)	766.9 (27)
	Greene	557	1157.5 (39)	625.3 (94)	Taylor	432	1329.1 (15)	694.2 (77)
	Howard	587	1230.4 (24)	711.1 (67)	Van Buren	455	1188.1 (33)	785.9 (22)
	Humboldt	588	1207.7 (29)	682.7 (82)	Wayne	506	1588.0 (02)	872.0 (03)
	Ida	489	1381.9 (09)	753.5 (35)	Worth	442	1155.0 (42)	727.8 (49)
					<b>Total</b>	10,941	1279.7	746.2
Counties with Average Population 10,000 – 20,000	Allamakee	792	1,098.9 (54)	721.0 (56)	Hardin	1,260	1427.1 (05)	796.4 (17)
	Appanoose	934	1,425.2 (06)	892.1 (01)	Iowa	814	1027.9 (68)	683.7 (80)
	Buena Vista	905	922.9 (81)	659.7 (86)	Jefferson	746	960.2 (75)	728.8 (47)
	Butler	938	1,278.9 (18)	760.8 (30)	Keokuk	616	1139.2 (46)	709.4 (71)
	Calhoun	696	1,377.2 (11)	711.4 (66)	Kossuth	902	1149.4 (44)	654.4 (87)
	Cass	896	1,287.5 (16)	714.7 (64)	Louisa	578	978.2 (74)	810.7 (14)
	Cedar	837	930.4 (80)	645.1 (91)	Lyon	603	1063.3 (63)	686.1 (79)
	Cherokee	752	1,270.1 (20)	715.6 (62)	Mitchell	649	1200.5 (30)	636.4 (93)
	Chickasaw	652	1,065.1 (62)	722.7 (54)	Montgomery	745	1349.5 (13)	801.9 (16)
	Clay	908	1,085.1 (57)	695.7 (76)	O'Brien	955	1350.3 (12)	710.8 (69)
	Clayton	999	1,123.7 (52)	711.0 (68)	Page	1,015	1277.0 (19)	755.5 (34)
	Crawford	842	1,018.7 (70)	721.2 (55)	Poweshiek	1,061	1138.5 (47)	728.7 (48)
	Delaware	781	889.3 (86)	646.8 (90)	Sac	720	1379.0 (10)	715.3 (63)
	Dickinson	875	1,055.0 (66)	618.1 (96)	Shelby	725	1173.6 (36)	682.9 (81)
	Emmet	607	1,166.1 (37)	717.2 (59)	Tama	959	1079.4 (59)	700.0 (74)
	Floyd	990	1,217.5 (28)	740.7 (41)	Union	754	1255.5 (21)	802.8 (15)
	Franklin	600	1,130.6 (50)	678.9 (84)	Winnebago	623	1137.7 (49)	681.2 (83)
	Hamilton	852	1,084.7 (58)	717.7 (58)	Wright	849	1286.0 (17)	709.9 (70)
	Hancock	645	1,125.3 (51)	695.9 (75)	<b>Total</b>	30,075	1148.9	712.1
Counties with Average Population > 20,000	Boone	1,394	1062.0 (64)	780.1 (24)	Lee	2,150	1195.8 (32)	854.8 (06)
	Buchanan	959	917.7 (82)	732.7 (44)	Mahaska	1,048	948.2 (76)	731.2 (45)
	Carroll	1,164	1118.9 (53)	653.6 (88)	Marion	1,652	1014.6 (71)	738.6 (42)
	Cerro Gordo	2,554	1157.3 (40)	794.6 (18)	Marshall	2,302	1177.9 (35)	860.5 (04)
	Clinton	2,640	1072.8 (61)	794.2 (19)	Muscatine	1,859	880.6 (87)	830.0 (10)
	Des Moines	2,148	1057.2 (65)	743.3 (39)	Plymouth	1,231	1006.9 (72)	758.6 (32)
	Fayette	1,224	1185.1 (34)	719.4 (57)	Sioux	1,190	743.9 (95)	546.2 (99)
	Henry	1,039	1033.5 (67)	760.5 (31)	Wapello	2,059	1158.5 (38)	827.0 (12)
	Jackson	1,072	1074.0 (60)	745.7 (37)	Webster	2,354	1220.5 (26)	879.3 (02)
	Jasper	1,843	1001.5 (73)	764.2 (29)	Winneshek	851	817.6 (91)	555.6 (98)
					<b>Total</b>	32,733	1051.2	764.6
MSA Counties	Benton	1,113	837.5 (90)	652.8 (89)	Linn	7,730	762.6 (94)	709.3 (72)
	Black Hawk	5,520	871.2 (89)	723.5 (53)	Madison	661	875.0 (88)	725.9 (51)
	Bremer	1,097	934.1 (79)	641.4 (92)	Mills	669	892.5 (85)	837.4 (09)
	Dallas	1,657	606.9 (97)	777.7 (25)	Polk	14,385	703.7 (96)	726.9 (50)
	Dubuque	4,299	939.1 (78)	729.8 (46)	Pottawattamie	4,232	947.4 (77)	843.3 (07)
	Grundy	704	1156.0 (41)	701.0 (73)	Scott	6,412	793.9 (93)	765.4 (28)
	Guthrie	678	1217.7 (27)	793.1 (20)	Story	2,416	577.2 (98)	619.7 (95)
	Harrison	927	1199.8 (31)	842.0 (08)	Warren	1,732	794.7 (92)	742.1 (40)
	Johnson	2,757	446.3 (99)	617.6 (97)	Washington	1,157	1096.5 (55)	713.0 (65)
	Jones	922	905.5 (83)	664.4 (85)	Woodbury	4,549	894.9 (84)	815.1 (13)
					<b>Total</b>	63,617	771.9	729.6
<b>State Total</b>		137,366	926.4	734.3				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# All Causes Mortality by County Group 1976-2008



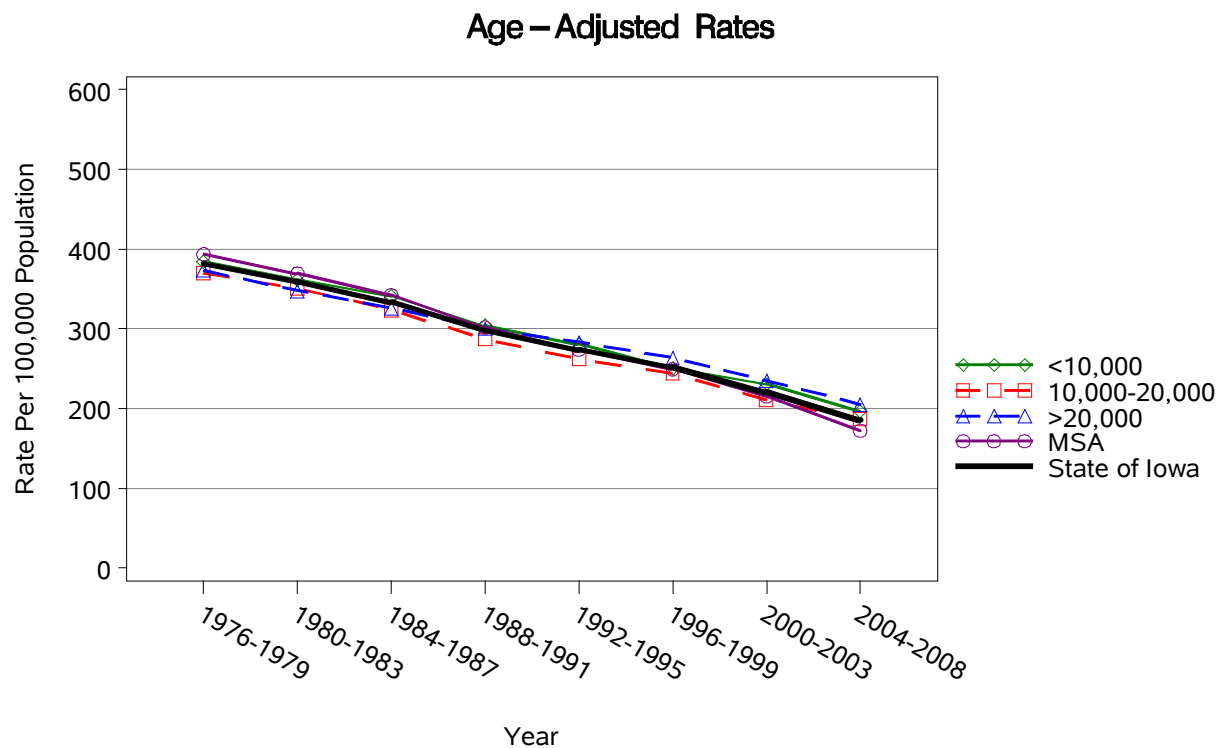
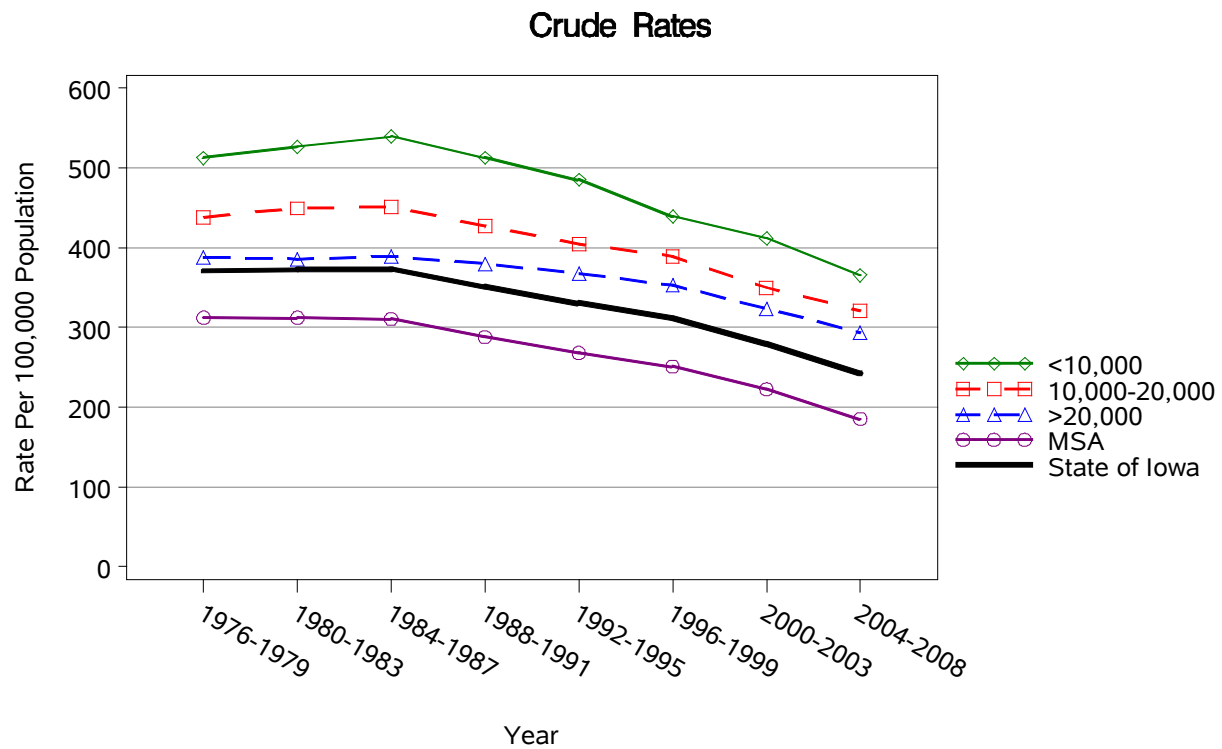
## Heart Disease Mortality 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	169	441.6 (06)	211.3 (18)	Lucas	124	261.1 (71)	161.7 (83)
	Adams	73	352.9 (25)	174.4 (65)	Monona	234	506.3 (03)	237.6 (08)
	Audubon	99	318.9 (41)	149.9 (92)	Monroe	116	302.9 (53)	175.9 (62)
	Clarke	177	389.2 (13)	261.6 (04)	Osceola	160	487.1 (04)	278.2 (03)
	Davis	108	252.7 (77)	172.7 (71)	Palo Alto	153	322.8 (38)	156.2 (88)
	Decatur	126	301.2 (55)	202.1 (27)	Pocahontas	153	397.5 (11)	203.1 (23)
	Fremont	109	289.1 (61)	169.1 (77)	Ringgold	99	386.5 (14)	170.0 (73)
	Greene	169	351.2 (26)	177.0 (61)	Taylor	125	384.6 (15)	180.5 (56)
	Howard	181	379.4 (17)	197.0 (35)	Van Buren	105	274.2 (66)	168.7 (78)
	Humboldt	193	396.4 (12)	202.4 (26)	Wayne	162	508.4 (02)	248.4 (07)
	Ida	146	412.6 (09)	211.4 (17)	Worth	144	376.3 (18)	217.0 (15)
					<b>Total</b>	3,125	365.5	196.3
Counties with Average Population 10,000 – 20,000	Allamakee	168	233.1 (83)	145.1 (96)	Hardin	353	399.8 (10)	206.1 (22)
	Appanoose	437	666.8 (01)	386.3 (01)	Iowa	202	255.1 (76)	158.0 (86)
	Buena Vista	255	260.0 (72)	177.2 (60)	Jefferson	200	257.4 (74)	186.1 (49)
	Butler	310	422.6 (07)	235.4 (11)	Keokuk	162	299.6 (56)	173.3 (69)
	Calhoun	166	328.5 (32)	157.6 (87)	Kossuth	248	316.0 (43)	168.3 (79)
	Cass	226	324.8 (34)	174.1 (67)	Louisa	155	262.3 (70)	209.3 (20)
	Cedar	219	243.4 (79)	160.2 (85)	Lyon	174	306.8 (49)	183.7 (51)
	Cherokee	211	356.4 (23)	194.7 (38)	Mitchell	226	418.0 (08)	198.2 (33)
	Chickasaw	222	362.6 (21)	235.9 (10)	Montgomery	185	335.1 (29)	190.3 (45)
	Clay	188	224.7 (85)	136.8 (98)	O'Brien	253	357.7 (22)	175.8 (63)
	Clayton	289	325.1 (33)	193.0 (40)	Page	242	304.5 (51)	175.2 (64)
	Crawford	208	251.7 (78)	171.1 (72)	Poweshiek	296	317.6 (42)	186.9 (48)
	Delaware	208	236.9 (81)	165.5 (80)	Sac	200	383.1 (16)	180.1 (57)
	Dickinson	269	324.3 (35)	178.9 (58)	Shelby	190	307.6 (47)	162.0 (81)
	Emmet	176	338.1 (27)	192.0 (41)	Tama	241	271.3 (68)	169.6 (74)
	Floyd	270	332.0 (30)	193.1 (39)	Union	292	486.2 (05)	287.5 (02)
	Franklin	171	322.2 (39)	181.1 (54)	Winnebago	146	266.6 (69)	145.7 (95)
	Hamilton	252	320.8 (40)	197.6 (34)	Wright	201	304.5 (51)	161.4 (84)
	Hancock	180	314.0 (44)	184.2 (50)	<b>Total</b>	8,391	320.6	186.6
Counties with Average Population > 20,000	Boone	381	290.3 (60)	202.7 (25)	Lee	668	371.5 (20)	254.7 (06)
	Buchanan	230	220.1 (86)	169.5 (75)	Mahaska	316	285.9 (62)	209.8 (19)
	Carroll	337	323.9 (37)	174.3 (66)	Marion	419	257.3 (75)	178.5 (59)
	Cerro Gordo	673	305.0 (50)	200.9 (29)	Marshall	541	276.8 (65)	198.7 (31)
	Clinton	915	371.8 (19)	260.6 (05)	Muscatine	429	203.2 (89)	189.6 (46)
	Des Moines	598	294.3 (58)	198.5 (32)	Plymouth	346	283.0 (63)	202.8 (24)
	Fayette	323	312.7 (46)	181.0 (55)	Sioux	323	201.9 (91)	142.5 (97)
	Henry	298	296.4 (57)	206.7 (21)	Wapello	576	324.1 (36)	228.3 (13)
	Jackson	354	354.7 (24)	236.9 (09)	Webster	652	338.0 (28)	235.1 (12)
	Jasper	504	273.9 (67)	201.6 (28)	Winneshek	250	240.2 (80)	156.2 (88)
					<b>Total</b>	9,133	293.3	205.0
MSA Counties	Benton	389	292.7 (59)	214.9 (16)	Linn	1,667	164.5 (95)	149.4 (93)
	Black Hawk	1,376	217.2 (88)	173.2 (70)	Madison	137	181.3 (93)	148.2 (94)
	Bremer	361	307.4 (48)	199.4 (30)	Mills	176	234.8 (82)	218.4 (14)
	Dallas	410	150.2 (97)	191.7 (43)	Polk	3,367	164.7 (94)	169.2 (76)
	Dubuque	1,185	258.9 (73)	196.5 (37)	Pottawattamie	978	218.9 (87)	191.8 (42)
	Grundy	202	331.7 (31)	187.3 (47)	Scott	1,466	181.5 (92)	173.5 (68)
	Guthrie	157	282.0 (64)	182.4 (52)	Story	616	147.2 (98)	152.2 (90)
	Harrison	233	301.6 (54)	197.0 (35)	Warren	356	163.3 (96)	150.9 (91)
	Johnson	603	97.6 (99)	136.3 (99)	Washington	331	313.7 (45)	191.3 (44)
	Jones	234	229.8 (84)	162.0 (81)	Woodbury	1,030	202.6 (90)	182.2 (53)
					<b>Total</b>	15,274	185.3	172.3
	<b>State Total</b>	35,923	242.3	185.4				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Heart Disease Mortality by County Group 1976-2008



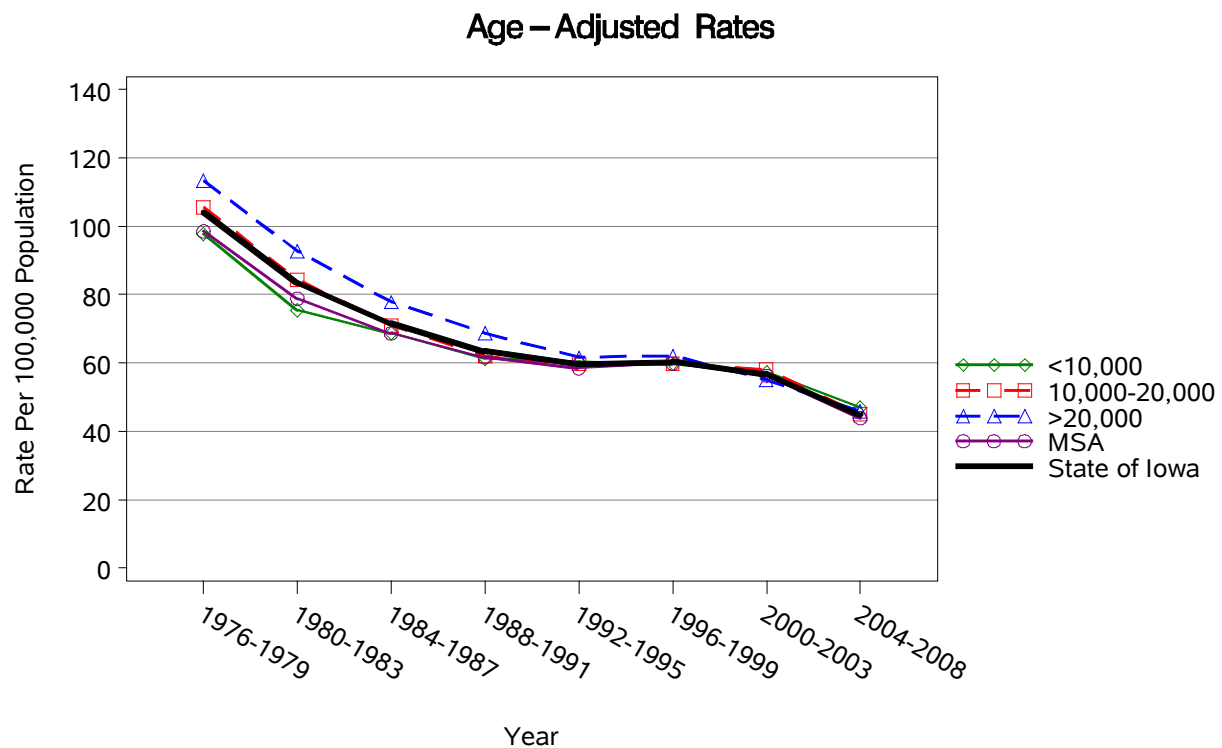
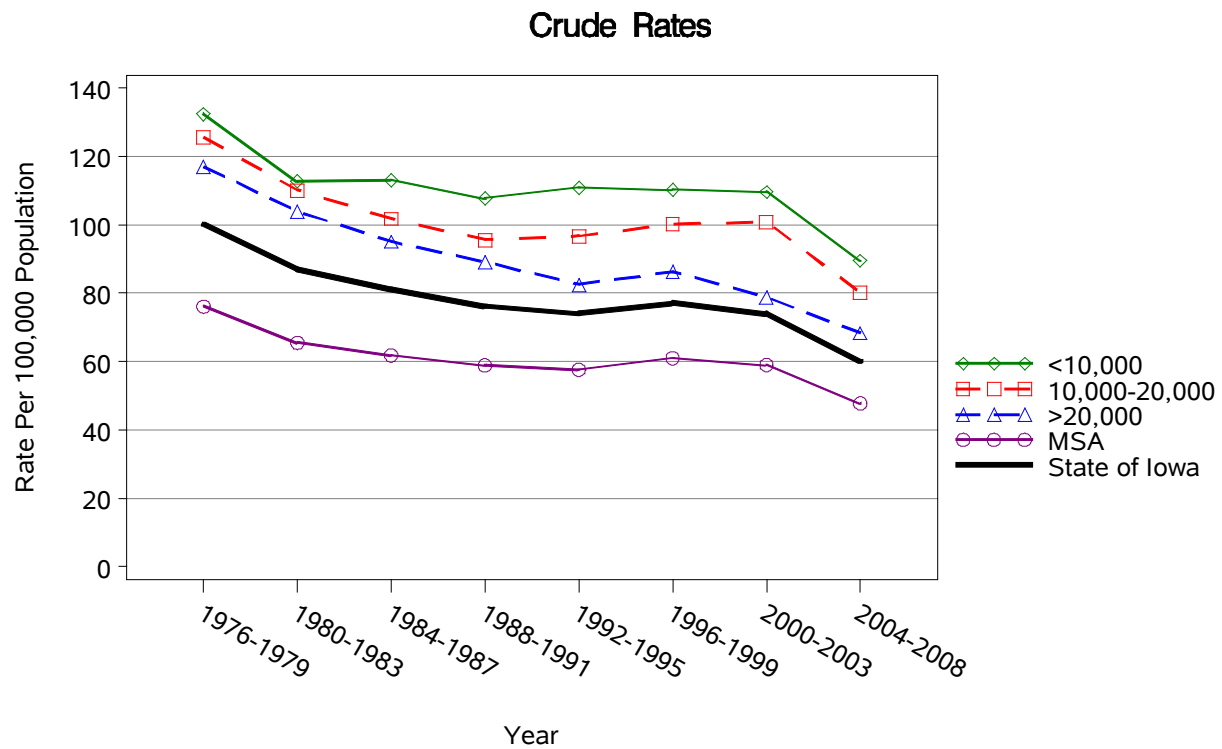
## Stroke Mortality 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )		County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	48	125.4 (07)	53.7 (17)		Lucas	41	86.3 (25)	55.4 (16)
	Adams	14	67.7 (53)	39.2 (69)		Monona	48	103.9 (14)	45.3 (43)
	Audubon	34	109.5 (11)	49.9 (26)		Monroe	59	154.1 (01)	90.8 (01)
	Clarke	26	57.2 (76)	37.4 (77)		Osceola	24	73.1 (43)	42.1 (56)
	Davis	44	102.9 (16)	67.3 (04)		Palo Alto	43	90.7 (20)	45.5 (42)
	Decatur	26	62.2 (65)	39.4 (68)		Pocahontas	51	132.5 (05)	64.0 (08)
	Fremont	26	69.0 (49)	37.1 (79)		Ringgold	14	54.7 (81)	28.7 (95)
	Greene	38	79.0 (34)	34.8 (85)		Taylor	29	89.2 (23)	43.6 (50)
	Howard	28	58.7 (71)	29.0 (94)		Van Buren	28	73.1 (43)	44.9 (44)
	Humboldt	38	78.0 (36)	37.4 (77)		Wayne	48	150.6 (02)	68.8 (03)
	Ida	28	79.1 (33)	41.8 (59)		Worth	30	78.4 (35)	46.8 (36)
						<b>Total</b>	765	89.5	47.0
Counties with Average Population 10,000 – 20,000	Allamakee	76	105.5 (13)	66.3 (06)		Hardin	120	135.9 (04)	67.3 (04)
	Appanoose	45	68.7 (50)	40.7 (63)		Iowa	52	65.7 (57)	38.3 (72)
	Buena Vista	52	53.0 (84)	35.7 (84)		Jefferson	70	90.1 (21)	66.3 (06)
	Butler	62	84.5 (26)	45.7 (41)		Keokuk	35	64.7 (60)	42.1 (56)
	Calhoun	58	114.8 (09)	50.7 (23)		Kossuth	69	87.9 (24)	48.5 (31)
	Cass	77	110.6 (10)	51.2 (21)		Louisa	35	59.2 (69)	46.2 (40)
	Cedar	93	103.4 (15)	61.5 (11)		Lyon	51	89.9 (22)	55.8 (15)
	Cherokee	44	74.3 (42)	36.3 (82)		Mitchell	43	79.5 (31)	38.4 (71)
	Chickasaw	24	39.2 (95)	24.7 (98)		Montgomery	70	126.8 (06)	60.1 (13)
	Clay	65	77.7 (37)	46.4 (38)		O'Brien	59	83.4 (27)	37.7 (75)
	Clayton	67	75.4 (40)	43.8 (49)		Page	57	71.7 (47)	38.3 (72)
	Crawford	43	52.0 (85)	32.1 (90)		Poweshiek	102	109.5 (11)	63.5 (09)
	Delaware	48	54.7 (81)	36.6 (81)		Sac	74	141.7 (03)	60.9 (12)
	Dickinson	53	63.9 (61)	33.6 (88)		Shelby	49	79.3 (32)	41.9 (58)
	Emmet	30	57.6 (73)	31.6 (92)		Tama	41	46.1 (89)	25.8 (97)
	Floyd	61	75.0 (41)	41.3 (60)		Union	48	79.9 (30)	49.7 (27)
	Franklin	30	56.5 (77)	36.7 (80)		Winnebago	36	65.7 (57)	34.5 (86)
	Hamilton	45	57.3 (75)	34.0 (87)		Wright	67	101.5 (17)	46.5 (37)
	Hancock	47	82.0 (29)	49.7 (27)		<b>Total</b>	2,098	80.1	45.0
Counties with Average Population > 20,000	Boone	96	73.1 (43)	50.1 (25)		Lee	130	72.3 (46)	47.9 (33)
	Buchanan	60	57.4 (74)	42.9 (52)		Mahaska	74	66.9 (55)	47.4 (35)
	Carroll	61	58.6 (72)	27.3 (96)		Marion	101	62.0 (67)	42.7 (54)
	Cerro Gordo	217	98.3 (18)	62.2 (10)		Marshall	110	56.3 (78)	38.8 (70)
	Clinton	157	63.8 (62)	44.0 (46)		Muscatine	133	63.0 (63)	58.9 (14)
	Des Moines	156	76.8 (39)	49.5 (29)		Plymouth	72	58.9 (70)	41.2 (62)
	Fayette	55	53.3 (83)	29.6 (93)		Sioux	55	34.4 (98)	22.4 (99)
	Henry	122	121.4 (08)	79.7 (02)		Wapello	148	83.3 (28)	53.0 (18)
	Jackson	68	68.1 (52)	44.0 (46)		Webster	120	62.2 (65)	40.6 (64)
	Jasper	122	66.3 (56)	48.3 (32)		Winneshek	71	68.2 (51)	39.6 (67)
						<b>Total</b>	2,128	68.3	45.8
MSA Counties	Benton	57	42.9 (92)	32.0 (91)		Linn	427	42.1 (94)	37.7 (75)
	Black Hawk	427	67.4 (54)	51.5 (20)		Madison	35	46.3 (88)	41.3 (60)
	Bremer	77	65.6 (59)	42.8 (53)		Mills	33	44.0 (91)	39.8 (66)
	Dallas	98	35.9 (96)	46.4 (38)		Polk	872	42.7 (93)	43.9 (48)
	Dubuque	322	70.3 (48)	51.2 (21)		Pottawattamie	251	56.2 (79)	49.4 (30)
	Grundy	58	95.2 (19)	52.8 (19)		Scott	402	49.8 (86)	47.6 (34)
	Guthrie	35	62.9 (64)	38.2 (74)		Story	149	35.6 (97)	36.1 (83)
	Harrison	60	77.7 (37)	50.6 (24)		Warren	103	47.3 (87)	43.2 (51)
	Johnson	184	29.8 (99)	42.2 (55)		Washington	58	55.0 (80)	32.8 (89)
	Jones	63	61.9 (68)	44.2 (45)		Woodbury	230	45.2 (90)	40.1 (65)
						<b>Total</b>	3,941	47.8	43.9
<b>State Total</b>		8,932	60.2	44.9					

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Stroke Mortality by County Group 1976-2008





# Chronic Obstructive Pulmonary Disease Mortality 2004-2008

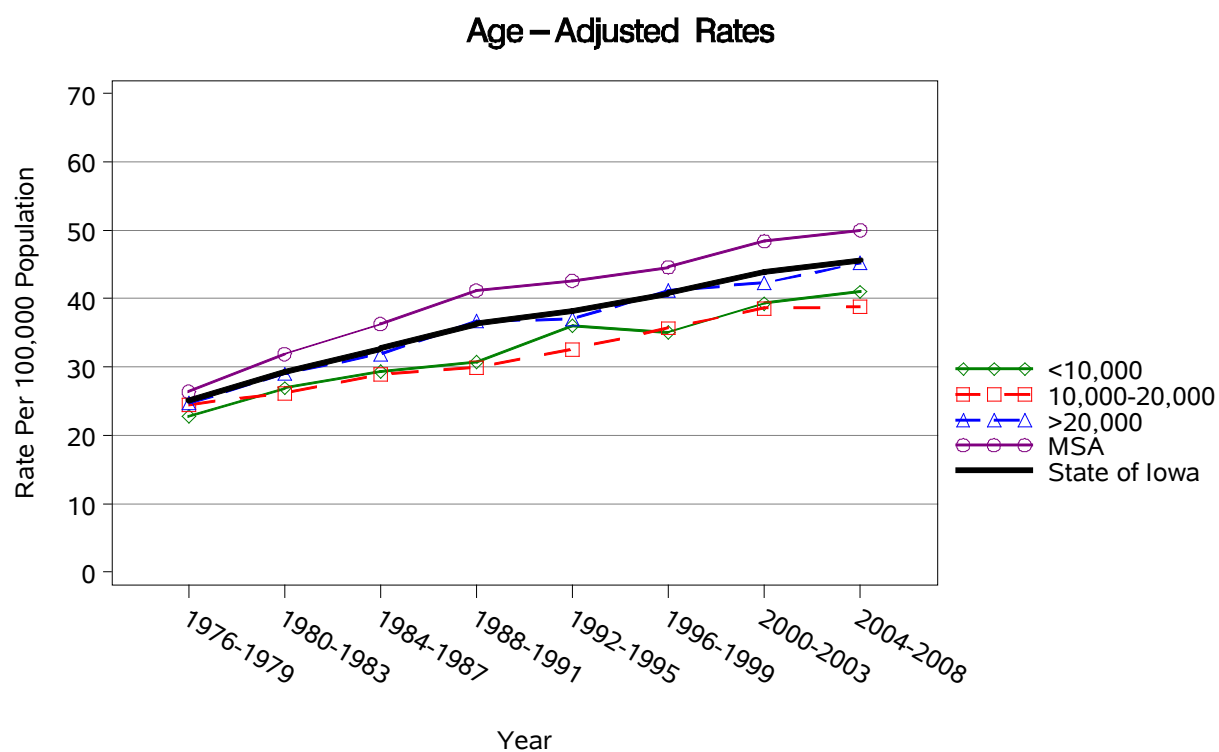
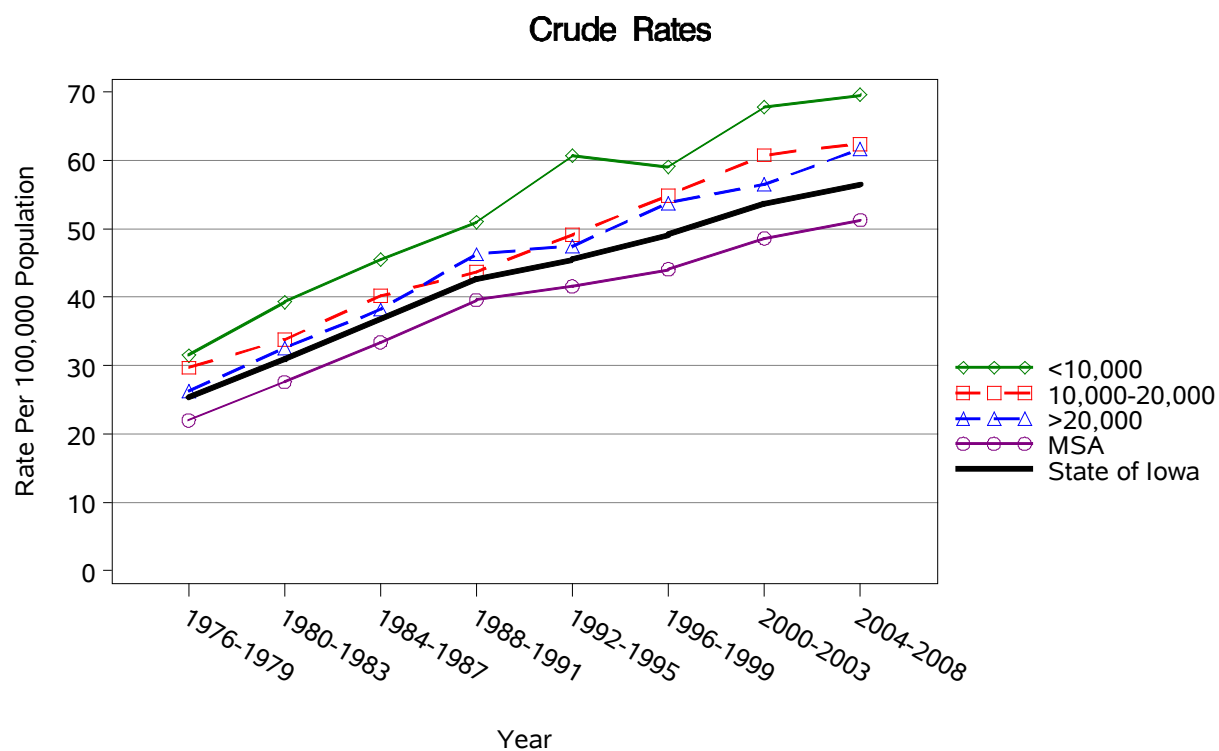
	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	25	65.3 (39)	33.7 (77)	Lucas	25	52.6 (68)	37.0 (65)
	Adams	7	33.8 (97)	18.7 (99)	Monona	44	95.2 (05)	46.3 (33)
	Audubon	31	99.9 (03)	49.7 (22)	Monroe	34	88.8 (13)	55.6 (11)
	Clarke	24	52.8 (67)	39.0 (56)	Osceola	13	39.6 (89)	24.7 (96)
	Davis	24	56.2 (59)	37.9 (61)	Palo Alto	41	86.5 (14)	50.1 (18)
	Decatur	26	62.2 (42)	43.6 (44)	Pocahontas	30	77.9 (21)	39.2 (55)
	Fremont	34	90.2 (12)	54.2 (14)	Ringgold	30	117.1 (01)	60.1 (07)
	Greene	28	58.2 (53)	32.7 (84)	Taylor	30	92.3 (10)	50.8 (17)
	Howard	21	44.0 (84)	26.5 (92)	Van Buren	21	54.8 (62)	35.6 (69)
	Humboldt	32	65.7 (37)	35.9 (66)	Wayne	33	103.6 (02)	59.6 (08)
	Ida	23	65.0 (40)	34.7 (73)	Worth	19	49.6 (75)	31.3 (85)
					<b>Total</b>	595	69.6	41.0
Counties with Average Population 10,000 – 20,000	Allamakee	43	59.7 (47)	39.3 (54)	Hardin	58	65.7 (37)	37.5 (63)
	Appanoose	27	41.2 (88)	25.3 (94)	Iowa	29	36.6 (94)	25.0 (95)
	Buena Vista	67	68.3 (31)	48.7 (26)	Jefferson	40	51.5 (72)	44.0 (41)
	Butler	43	58.6 (52)	33.3 (79)	Keokuk	44	81.4 (17)	49.9 (19)
	Calhoun	48	95.0 (06)	44.9 (36)	Kossuth	48	61.2 (44)	35.3 (71)
	Cass	52	74.7 (24)	43.1 (46)	Louisa	34	57.5 (55)	48.3 (28)
	Cedar	47	52.2 (70)	37.4 (64)	Lyon	26	45.8 (80)	28.3 (88)
	Cherokee	45	76.0 (23)	42.6 (47)	Mitchell	20	37.0 (93)	20.3 (98)
	Chickasaw	26	42.5 (86)	27.8 (90)	Montgomery	54	97.8 (04)	58.8 (09)
	Clay	37	44.2 (83)	27.1 (91)	O'Brien	57	80.6 (18)	42.1 (49)
	Clayton	56	63.0 (41)	40.0 (53)	Page	68	85.5 (15)	51.5 (16)
	Crawford	41	49.6 (75)	33.8 (75)	Poweshiek	69	74.0 (25)	49.8 (21)
	Delaware	46	52.4 (69)	38.2 (60)	Sac	48	91.9 (11)	44.8 (37)
	Dickinson	49	59.1 (49)	32.8 (83)	Shelby	34	55.0 (61)	33.8 (75)
	Emmet	25	48.0 (78)	28.3 (88)	Tama	63	70.9 (28)	47.7 (30)
	Floyd	58	71.3 (26)	42.5 (48)	Union	41	68.3 (31)	43.9 (42)
	Franklin	30	56.5 (57)	33.4 (78)	Winnebago	30	54.8 (62)	35.9 (66)
	Hamilton	54	68.8 (30)	44.1 (40)	Wright	38	57.6 (54)	32.9 (82)
	Hancock	39	68.0 (33)	44.3 (38)	<b>Total</b>	1,634	62.4	38.8
Counties with Average Population > 20,000	Boone	80	60.9 (45)	44.3 (38)	Lee	121	67.3 (34)	48.7 (26)
	Buchanan	57	54.5 (64)	43.2 (45)	Mahaska	47	42.5 (86)	33.0 (81)
	Carroll	63	60.6 (46)	35.4 (70)	Marion	84	51.6 (71)	40.2 (52)
	Cerro Gordo	186	84.3 (16)	57.1 (10)	Marshall	185	94.7 (07)	68.9 (02)
	Clinton	146	59.3 (48)	43.8 (43)	Muscatine	98	46.4 (79)	45.6 (35)
	Des Moines	134	65.9 (36)	46.8 (32)	Plymouth	46	37.6 (92)	29.0 (86)
	Fayette	61	59.1 (49)	35.8 (68)	Sioux	62	38.8 (91)	28.6 (87)
	Henry	45	44.8 (82)	34.2 (74)	Wapello	124	69.8 (29)	49.0 (25)
	Jackson	71	71.1 (27)	47.3 (31)	Webster	181	93.8 (09)	68.7 (03)
	Jasper	93	50.5 (73)	38.5 (58)	Winneshiek	38	36.5 (95)	24.3 (97)
					<b>Total</b>	1,922	61.7	45.2
MSA Counties	Benton	67	50.4 (74)	40.9 (51)	Linn	579	57.1 (56)	54.7 (13)
	Black Hawk	374	59.0 (51)	49.1 (24)	Madison	33	43.7 (85)	38.3 (59)
	Bremer	46	39.2 (90)	26.4 (93)	Mills	46	61.4 (43)	62.8 (05)
	Dallas	97	35.5 (96)	49.5 (23)	Polk	917	44.9 (81)	48.3 (28)
	Dubuque	244	53.3 (66)	41.3 (50)	Pottawattamie	360	80.6 (18)	72.2 (01)
	Grundy	34	55.8 (60)	35.2 (72)	Scott	455	56.3 (58)	55.3 (12)
	Guthrie	44	79.0 (20)	51.9 (15)	Story	123	29.4 (98)	33.3 (79)
	Harrison	73	94.5 (08)	65.4 (04)	Warren	106	48.6 (77)	46.2 (34)
	Johnson	156	25.3 (99)	37.8 (62)	Washington	82	77.7 (22)	49.9 (19)
	Jones	55	54.0 (65)	38.8 (57)	Woodbury	339	66.7 (35)	62.6 (06)
					<b>Total</b>	4,230	51.3	50.0
<b>State Total</b>		8,381	56.5	45.6				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program



# Chronic Obstructive Pulmonary Disease Mortality by County Group 1976-2008



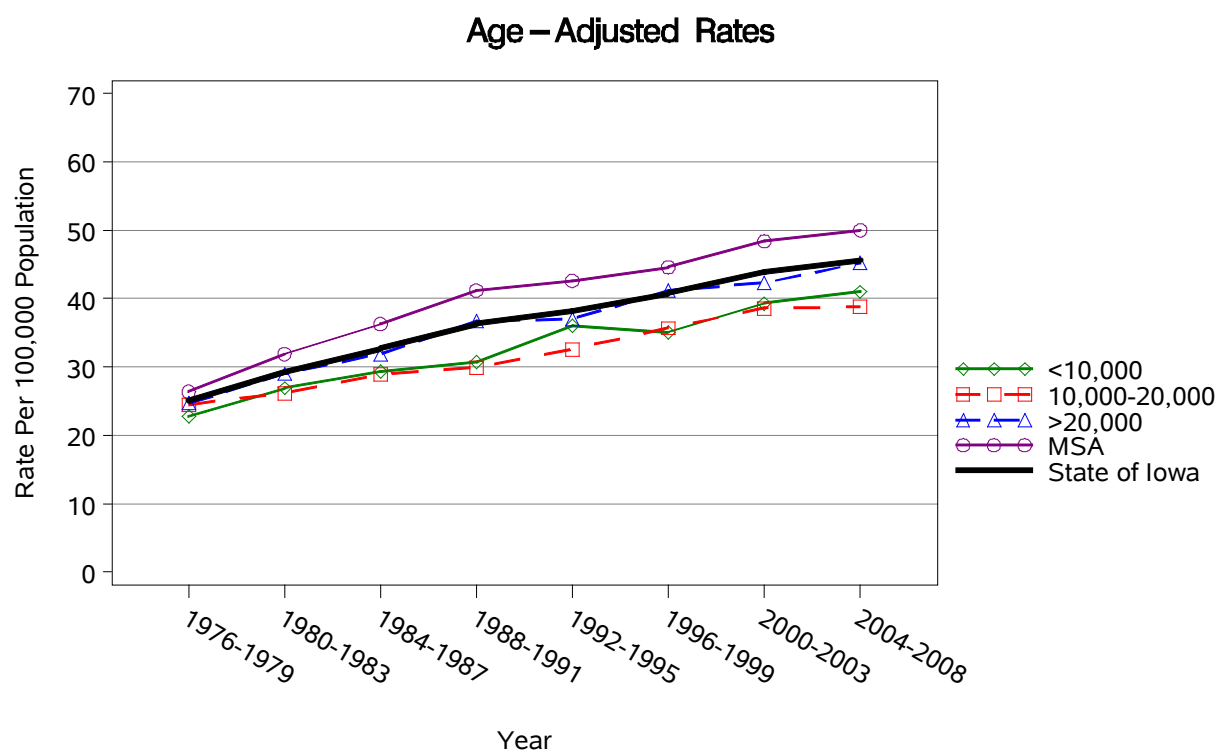
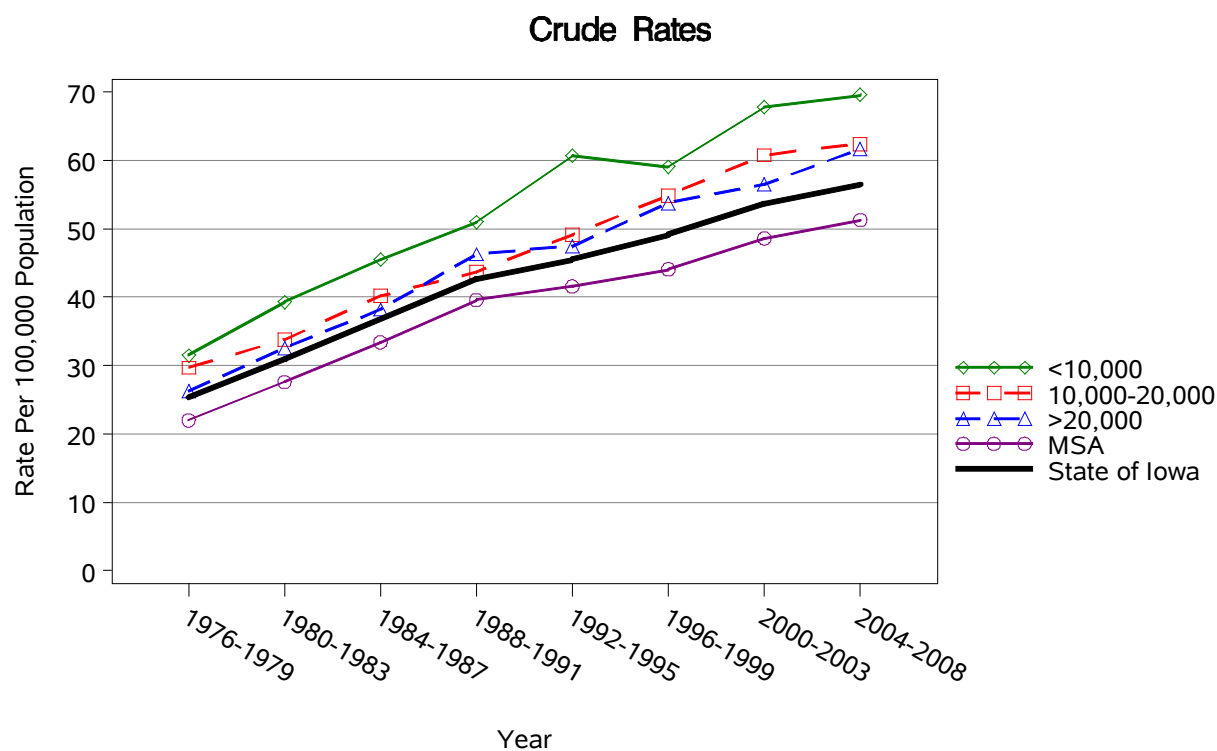
## Accidents and Adverse Effects Mortality 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	25	65.3 (07)	47.0 (27)	Lucas	21	44.2 (58)	41.4 (42)
	Adams	9	43.5 (60)	24.9 (99)	Monona	30	64.9 (10)	51.3 (16)
	Audubon	14	45.1 (56)	30.7 (85)	Monroe	19	49.6 (40)	41.1 (43)
	Clarke	26	57.2 (25)	54.9 (07)	Osceola	20	60.9 (14)	46.2 (30)
	Davis	20	46.8 (53)	46.3 (29)	Palo Alto	32	67.5 (05)	56.2 (05)
	Decatur	13	31.1 (94)	27.1 (92)	Pocahontas	17	44.2 (58)	34.0 (69)
	Fremont	18	47.7 (49)	41.1 (43)	Ringgold	8	31.2 (93)	32.3 (77)
	Greene	24	49.9 (39)	33.4 (74)	Taylor	13	40.0 (72)	26.3 (98)
	Howard	31	65.0 (09)	54.7 (08)	Van Buren	23	60.1 (16)	52.4 (13)
	Humboldt	25	51.3 (34)	48.0 (24)	Wayne	20	62.8 (12)	53.2 (10)
	Ida	29	82.0 (01)	64.6 (01)	Worth	15	39.2 (73)	28.3 (89)
					<b>Total</b>	452	52.9	43.3
Counties with Average Population 10,000 – 20,000	Allamakee	41	56.9 (27)	47.6 (26)	Hardin	53	60.0 (17)	42.6 (38)
	Appanoose	28	42.7 (63)	37.7 (55)	Iowa	38	48.0 (48)	38.8 (51)
	Buena Vista	31	31.6 (90)	27.1 (92)	Jefferson	33	42.5 (64)	38.6 (53)
	Butler	50	68.2 (04)	53.6 (09)	Keokuk	24	44.4 (57)	38.8 (51)
	Calhoun	29	57.4 (23)	48.2 (23)	Kossuth	33	42.1 (66)	31.7 (80)
	Cass	40	57.5 (22)	42.3 (41)	Louisa	39	66.0 (06)	62.0 (02)
	Cedar	35	38.9 (74)	33.5 (73)	Lyon	28	49.4 (42)	40.4 (46)
	Cherokee	42	70.9 (03)	52.9 (11)	Mitchell	30	55.5 (30)	44.8 (34)
	Chickasaw	44	71.9 (02)	60.3 (03)	Montgomery	34	61.6 (13)	52.6 (12)
	Clay	46	55.0 (31)	45.5 (32)	O'Brien	36	50.9 (36)	36.4 (60)
	Clayton	51	57.4 (23)	49.0 (19)	Page	32	40.3 (70)	31.4 (82)
	Crawford	46	55.7 (29)	49.8 (17)	Poweshiek	44	47.2 (51)	39.1 (49)
	Delaware	33	37.6 (77)	33.7 (70)	Sac	34	65.1 (08)	55.5 (06)
	Dickinson	39	47.0 (52)	36.7 (57)	Shelby	36	58.3 (21)	45.1 (33)
	Emmet	20	38.4 (76)	28.2 (90)	Tama	45	50.7 (38)	44.5 (35)
	Floyd	30	36.9 (79)	28.4 (88)	Union	34	56.6 (28)	49.5 (18)
	Franklin	26	49.0 (44)	31.6 (81)	Winnebago	30	54.8 (32)	43.2 (37)
	Hamilton	46	58.6 (20)	48.7 (20)	Wright	40	60.6 (15)	52.1 (14)
	Hancock	23	40.1 (71)	29.0 (87)	<b>Total</b>	1,343	51.3	41.8
Counties with Average Population > 20,000	Boone	65	49.5 (41)	44.0 (36)	Lee	82	45.6 (55)	38.3 (54)
	Buchanan	37	35.4 (86)	33.7 (70)	Mahaska	45	40.7 (68)	36.8 (56)
	Carroll	44	42.3 (65)	32.2 (78)	Marion	68	41.8 (67)	34.1 (68)
	Cerro Gordo	113	51.2 (35)	42.5 (39)	Marshall	93	47.6 (50)	40.0 (48)
	Clinton	90	36.6 (80)	32.9 (76)	Muscatine	77	36.5 (81)	35.8 (63)
	Des Moines	88	43.3 (61)	36.6 (59)	Plymouth	59	48.3 (47)	45.7 (31)
	Fayette	50	48.4 (46)	40.2 (47)	Sioux	51	31.9 (89)	26.8 (95)
	Henry	49	48.7 (45)	42.4 (40)	Wapello	95	53.5 (33)	47.8 (25)
	Jackson	36	36.1 (84)	33.0 (75)	Webster	110	57.0 (26)	48.4 (21)
	Jasper	86	46.7 (54)	40.6 (45)	Winneshek	38	36.5 (81)	31.2 (84)
					<b>Total</b>	1,376	44.2	38.2
MSA Counties	Benton	54	40.6 (69)	36.2 (61)	Linn	362	35.7 (85)	34.3 (67)
	Black Hawk	246	38.8 (75)	35.4 (64)	Madison	23	30.4 (95)	26.8 (95)
	Bremer	37	31.5 (91)	29.1 (86)	Mills	37	49.4 (42)	48.3 (22)
	Dallas	82	30.0 (96)	33.7 (70)	Polk	639	31.3 (92)	31.4 (82)
	Dubuque	137	29.9 (97)	26.4 (97)	Pottawattamie	162	36.3 (83)	35.4 (64)
	Grundy	31	50.9 (36)	39.0 (50)	Scott	283	35.0 (87)	34.5 (66)
	Guthrie	33	59.3 (18)	51.8 (15)	Story	108	25.8 (98)	27.0 (94)
	Harrison	49	63.4 (11)	58.0 (04)	Warren	82	37.6 (77)	36.7 (57)
	Johnson	143	23.1 (99)	27.3 (91)	Washington	62	58.8 (19)	47.0 (27)
	Jones	44	43.2 (62)	36.0 (62)	Woodbury	171	33.6 (88)	32.2 (78)
					<b>Total</b>	2,785	33.8	32.5
	<b>State Total</b>	5,956	40.2	35.8				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

# Accidents and Adverse Effects Mortality by County Group 1976-2008



# Alzheimer's Disease Mortality 2004-2008

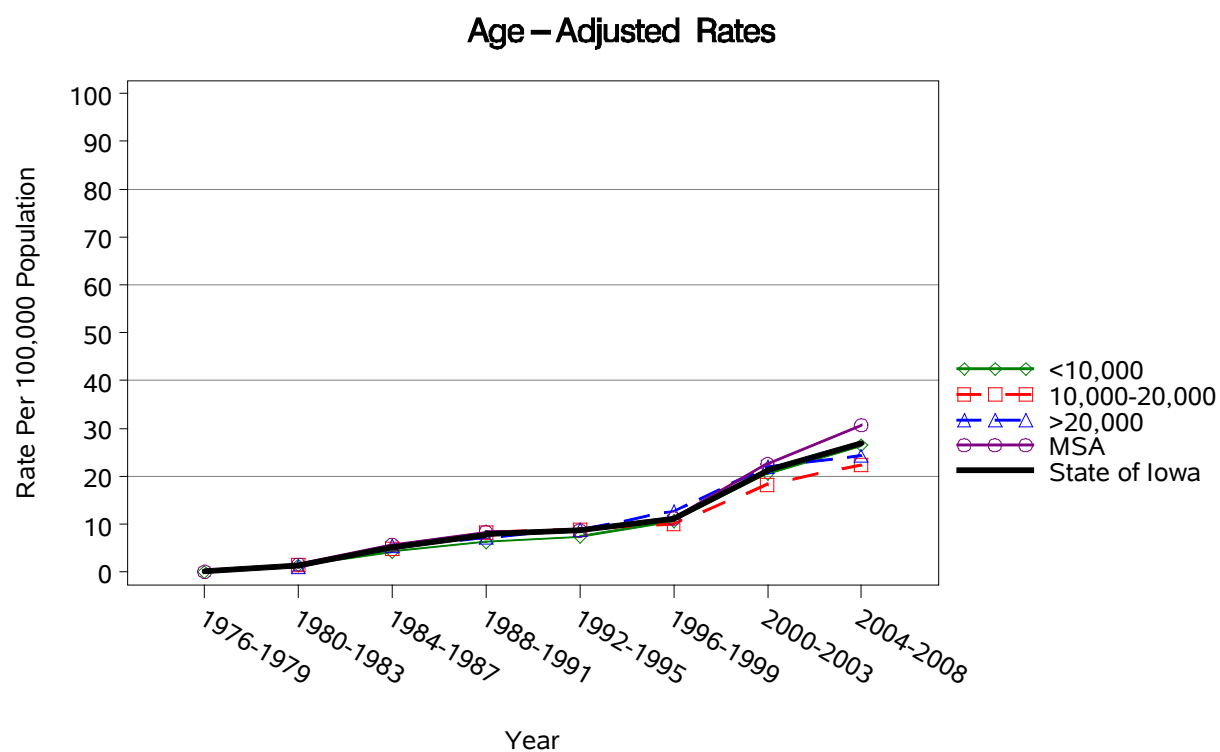
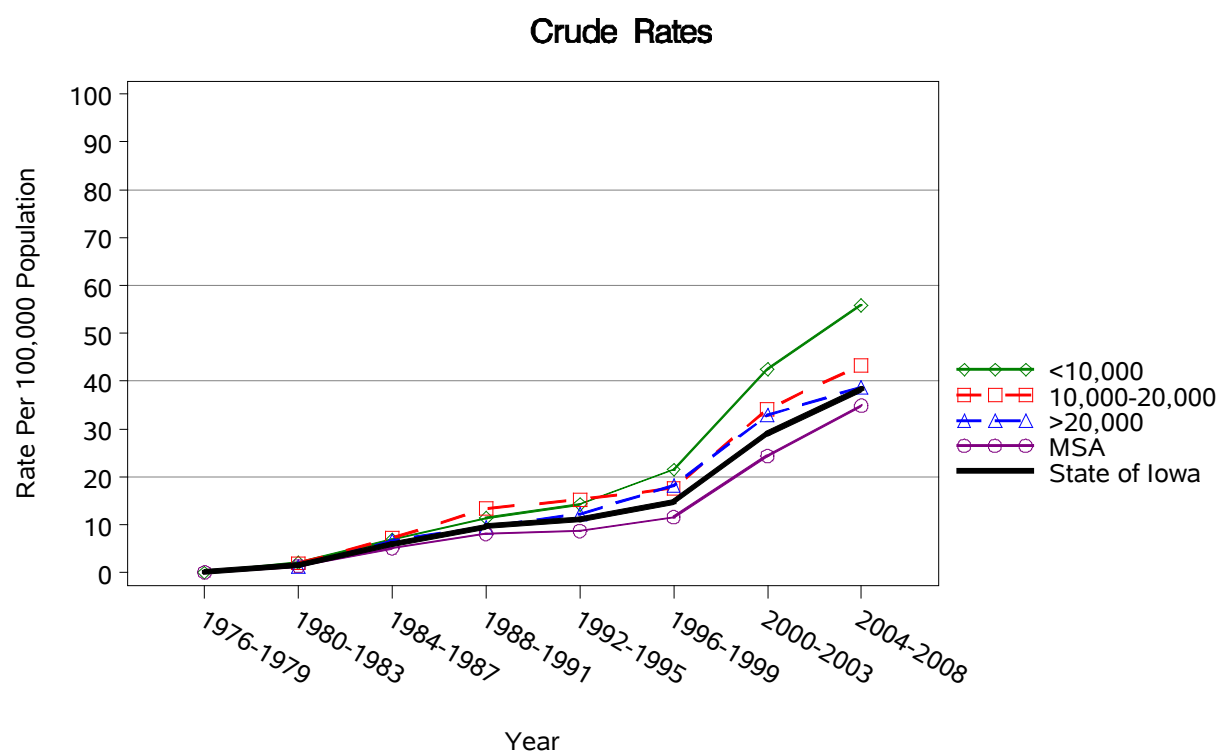
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	10	26.1	9.6	Lucas	31	65.3	35.4
	Adams	14	67.7	27.2	Monona	33	71.4	25.3
	Audubon	38	122.4	45.7	Monroe	14	36.6	20.7
	Clarke	40	88	54.3	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	34	71.7	31.8
	Decatur	14	33.5	20.3	Pocahontas	28	72.7	30.8
	Fremont	17	45.1	21.5	Ringgold	33	128.8	59.2
	Greene	13	27	11.9	Taylor	19	58.5	24.4
	Howard	33	69.2	33.2	Van Buren	15	39.2	20.3
	Humboldt	13	26.7	11.4	Wayne	13	40.8	19
	Ida	27	76.3	35.5	Worth	33	86.2	44.8
					<b>Total</b>	<b>478</b>	<b>55.9</b>	<b>26.5</b>
Counties with Average Population 10,000 – 20,000	Allamakee	35	48.6	28	Hardin	84	95.1	41
	Appanoose	16	24.4	13.7	Iowa	36	45.5	25.7
	Buena Vista	31	31.6	19.7	Jefferson	23	29.6	20.3
	Butler	16	21.8	11.6	Keokuk	10	18.5	9.3
	Calhoun	54	106.9	39.6	Kossuth	39	49.7	23.5
	Cass	38	54.6	24.3	Louisa	16	27.1	21.6
	Cedar	13	14.5	10	Lyon	25	44.1	24.4
	Cherokee	23	38.8	19.2	Mitchell	8	14.8	6.5
	Chickasaw	17	27.8	16.8	Montgomery	21	38	17.7
	Clay	31	37	20.7	O'Brien	38	53.7	21.1
	Clayton	39	43.9	23.7	Page	23	28.9	13.1
	Crawford	38	46	27.3	Poweshiek	49	52.6	28.7
	Delaware	38	43.3	28.1	Sac	15	28.7	11.2
	Dickinson	26	31.3	15.8	Shelby	28	45.3	22.9
	Emmet	29	55.7	29.1	Tama	63	70.9	38.9
	Floyd	47	57.8	29.6	Union	26	43.3	22.6
	Franklin	29	54.6	26.1	Winnebago	24	43.8	20
	Hamilton	37	47.1	26.2	Wright	26	39.4	17.2
	Hancock	26	45.4	23.6	<b>Total</b>	<b>1,137</b>	<b>43.4</b>	<b>22.4</b>
Counties with Average Population > 20,000	Boone	56	42.7	27.4	Lee	93	51.7	30.5
	Buchanan	22	21.1	16.3	Mahaska	16	14.5	9.8
	Carroll	43	41.3	19.2	Marion	65	39.9	25.2
	Cerro Gordo	117	53	31.3	Marshall	135	69.1	46
	Clinton	63	25.6	16.9	Muscatine	39	18.5	16.8
	Des Moines	79	38.9	22.9	Plymouth	50	40.9	27.3
	Fayette	55	53.3	24.9	Sioux	44	27.5	16.2
	Henry	22	21.9	14.5	Wapello	75	42.2	25
	Jackson	33	33.1	20.3	Webster	95	49.3	29
	Jasper	81	44	30.5	Winneshiek	24	23.1	13.4
					<b>Total</b>	<b>1,207</b>	<b>38.8</b>	<b>24.3</b>
MSA Counties	Benton	26	19.6	13.4	Linn	291	28.7	25.1
	Black Hawk	133	21	15.3	Madison	42	55.6	41.9
	Bremer	41	34.9	21.1	Mills	20	26.7	25.2
	Dallas	103	37.7	48.5	Polk	816	39.9	39.3
	Dubuque	202	44.1	30.4	Pottawattamie	160	35.8	30.6
	Grundy	40	65.7	32.9	Scott	269	33.3	31.4
	Guthrie	32	57.5	32.9	Story	77	18.4	18.2
	Harrison	36	46.6	29.3	Warren	195	89.5	79.5
	Johnson	95	15.4	22	Washington	42	39.8	20.7
	Jones	38	37.3	24.3	Woodbury	217	42.7	36.2
					<b>Total</b>	<b>2,875</b>	<b>34.9</b>	<b>30.7</b>
	<b>State Total</b>	<b>5,697</b>	<b>38.4</b>	<b>26.9</b>				

<sup>1</sup> Rates per 100,000 population<sup>2</sup> Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* represents a count less than 5

# Alzheimer's Disease Mortality by County Group 1976-2008



## Pneumonia/Influenza Mortality 2004-2008

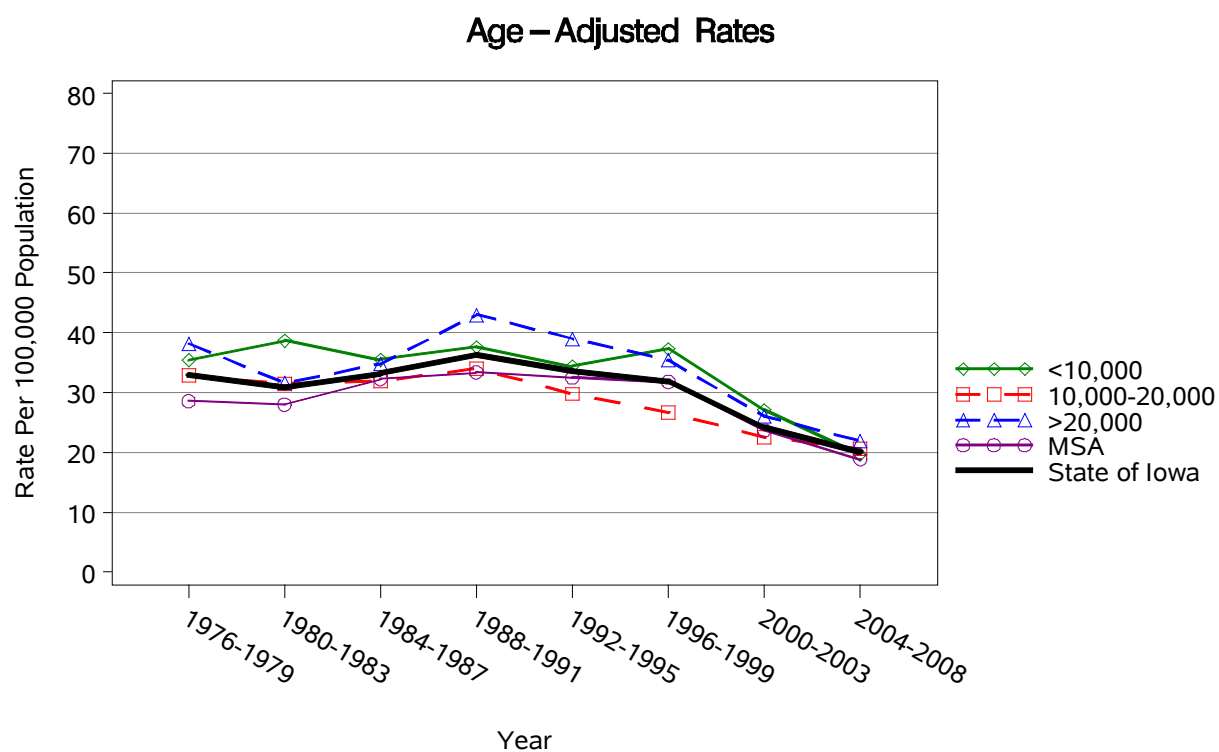
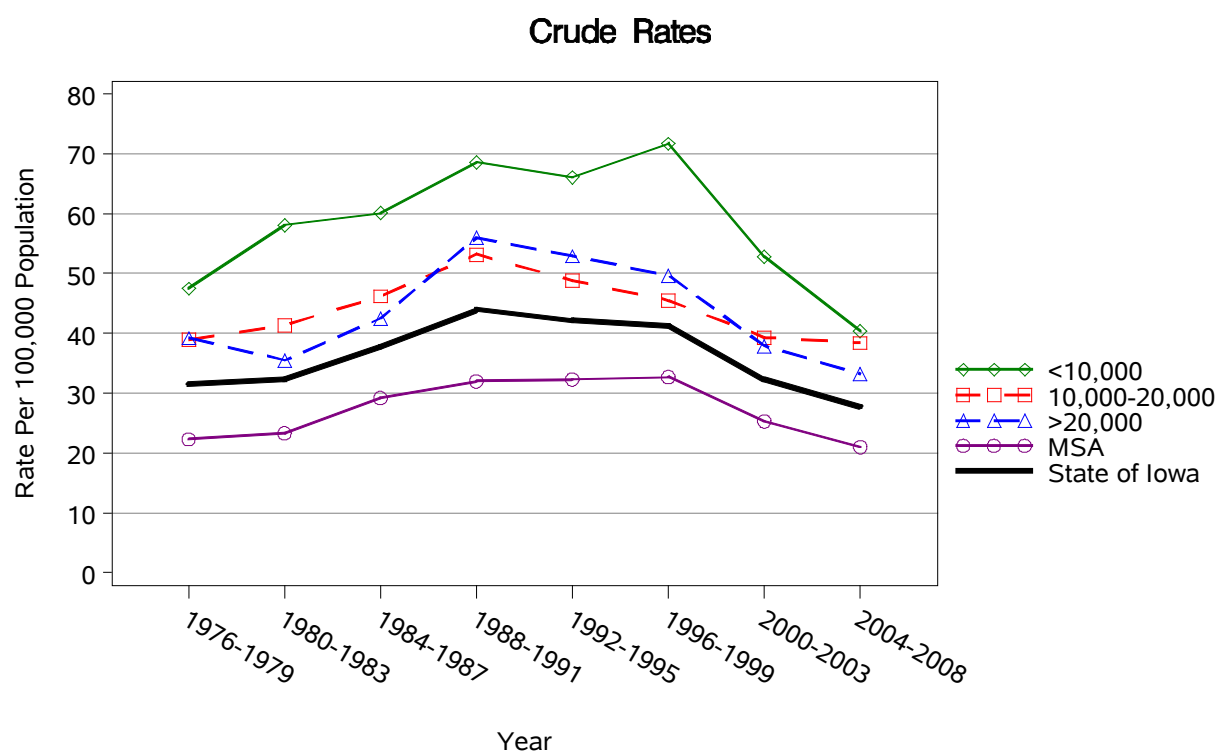
	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County (Rank <sup>3</sup> )	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	26	67.9 (09)	27.2 (17)	Lucas	36	75.8 (05)	40.4 (04)
	Adams	5	24.2 (71)	9.2 (94)	Monona	32	69.2 (08)	27.6 (15)
	Audubon	4	12.9 (95)	4.3 (98)	Monroe	16	41.8 (27)	24.7 (24)
	Clarke	12	26.4 (57)	14.8 (73)	Osceola	4	12.2 (97)	7.5 (96)
	Davis	39	91.2 (01)	53.9 (01)	Palo Alto	12	25.3 (65)	12.9 (83)
	Decatur	11	26.3 (58)	17.4 (61)	Pocahontas	22	57.2 (11)	26.1 (20)
	Fremont	15	39.8 (30)	20.3 (44)	Ringgold	6	23.4 (75)	10.1 (92)
	Greene	6	12.5 (96)	5.2 (97)	Taylor	6	18.5 (89)	8.4 (95)
	Howard	25	52.4 (16)	27.0 (19)	Van Buren	13	33.9 (43)	18.5 (55)
	Humboldt	18	37.0 (38)	19.8 (48)	Wayne	18	56.5 (12)	25.3 (23)
	Ida	10	28.3 (53)	11.7 (88)	Worth	9	23.5 (74)	11.2 (90)
					<b>Total</b>	<b>345</b>	<b>40.4</b>	<b>19.7</b>
Counties with Average Population 10,000 – 20,000	Allamakee	18	25.0 (67)	15.0 (71)	Hardin	23	26.1 (61)	12.4 (87)
	Appanoose	25	38.1 (35)	20.3 (44)	Iowa	27	34.1 (42)	17.8 (57)
	Buena Vista	39	39.8 (30)	23.7 (29)	Jefferson	33	42.5 (26)	31.6 (09)
	Butler	20	27.3 (54)	13.8 (78)	Keokuk	14	25.9 (62)	15.0 (71)
	Calhoun	24	47.5 (20)	21.1 (40)	Kossuth	26	33.1 (44)	15.9 (66)
	Cass	34	48.9 (18)	22.3 (37)	Louisa	18	30.5 (48)	24.4 (26)
	Cedar	26	28.9 (52)	17.8 (57)	Lyon	15	26.5 (56)	13.0 (82)
	Cherokee	15	25.3 (65)	13.3 (81)	Mitchell	46	85.1 (03)	39.9 (05)
	Chickasaw	14	22.9 (76)	13.6 (79)	Montgomery	27	48.9 (18)	24.6 (25)
	Clay	36	43.0 (25)	24.4 (26)	O'Brien	49	69.3 (07)	28.6 (12)
	Clayton	22	24.7 (68)	14.2 (76)	Page	60	75.5 (06)	39.7 (06)
	Crawford	6	7.3 (99)	4.3 (98)	Poweshiek	37	39.7 (32)	19.6 (50)
	Delaware	23	26.2 (59)	17.7 (59)	Sac	28	53.6 (14)	22.5 (36)
	Dickinson	26	31.3 (47)	15.6 (68)	Shelby	33	53.4 (15)	27.4 (16)
	Emmet	21	40.3 (29)	21.4 (39)	Tama	18	20.3 (85)	10.5 (91)
	Floyd	18	22.1 (77)	12.9 (83)	Union	19	31.6 (46)	19.1 (53)
	Franklin	26	49.0 (17)	27.1 (18)	Winnebago	24	43.8 (23)	23.7 (29)
	Hamilton	36	45.8 (22)	28.1 (13)	Wright	54	81.8 (04)	35.4 (07)
	Hancock	25	43.6 (24)	22.9 (35)	<b>Total</b>	<b>1,005</b>	<b>38.4</b>	<b>20.6</b>
Counties with Average Population > 20,000	Boone	48	36.6 (39)	24.0 (28)	Lee	73	40.6 (28)	28.0 (14)
	Buchanan	21	20.1 (86)	15.2 (69)	Mahaska	29	26.2 (59)	18.1 (56)
	Carroll	40	38.4 (34)	20.3 (44)	Marion	59	36.2 (40)	23.6 (31)
	Cerro Gordo	64	29.0 (51)	19.2 (52)	Marshall	58	29.7 (50)	20.5 (42)
	Clinton	48	19.5 (88)	13.5 (80)	Muscatine	52	24.6 (69)	23.1 (34)
	Des Moines	80	39.4 (33)	25.9 (22)	Plymouth	27	22.1 (77)	15.2 (69)
	Fayette	93	90.0 (02)	45.7 (03)	Sioux	34	21.3 (82)	12.6 (86)
	Henry	27	26.9 (55)	16.5 (63)	Wapello	84	47.3 (21)	29.3 (11)
	Jackson	24	24.0 (72)	14.4 (74)	Webster	107	55.5 (13)	34.3 (08)
	Jasper	40	21.7 (81)	16.3 (64)	Winneshiek	25	24.0 (72)	13.9 (77)
					<b>Total</b>	<b>1,033</b>	<b>33.2</b>	<b>21.9</b>
MSA Counties	Benton	22	16.6 (93)	11.3 (89)	Linn	224	22.1 (77)	19.7 (49)
	Black Hawk	83	13.1 (94)	10.0 (93)	Madison	44	58.2 (10)	45.9 (02)
	Bremer	26	22.1 (77)	14.3 (75)	Mills	24	32.0 (45)	29.4 (10)
	Dallas	49	17.9 (92)	23.3 (33)	Polk	402	19.7 (87)	19.9 (47)
	Dubuque	174	38.0 (36)	26.1 (20)	Pottawattamie	109	24.4 (70)	21.1 (40)
	Grundy	23	37.8 (37)	19.5 (51)	Scott	149	18.4 (90)	17.6 (60)
	Guthrie	20	35.9 (41)	21.7 (38)	Story	89	21.3 (82)	20.4 (43)
	Harrison	16	20.7 (84)	12.8 (85)	Warren	56	25.7 (63)	23.4 (32)
	Johnson	72	11.7 (98)	16.2 (65)	Washington	32	30.3 (49)	18.9 (54)
	Jones	26	25.5 (64)	17.1 (62)	Woodbury	92	18.1 (91)	15.7 (67)
					<b>Total</b>	<b>1,732</b>	<b>21.0</b>	<b>18.9</b>
	<b>State Total</b>	<b>4,115</b>	<b>27.8</b>	<b>20.1</b>				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* represents a count less than 5

# Pneumonia/Influenza Mortality by County Group 1976-2008





## Diabetes Mellitus Mortality 2004-2008

	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )	County	#	Crude <sup>1</sup> (Rank <sup>3</sup> )	Adjusted <sup>1,2</sup> (Rank <sup>3</sup> )
Counties with Average Population < 10,000	Adair	11	28.7 (57)	14.6 (81)	Lucas	37	77.9 (02)	51.5 (02)
	Adams	6	29.0 (54)	24.5 (30)	Monona	19	41.1 (20)	20.3 (54)
	Audubon	10	32.2 (45)	17.0 (75)	Monroe	9	23.5 (75)	17.1 (74)
	Clarke	18	39.6 (24)	31.0 (10)	Osceola	12	36.5 (31)	21.8 (41)
	Davis	23	53.8 (08)	36.8 (05)	Palo Alto	18	38.0 (29)	20.6 (48)
	Decatur	12	28.7 (57)	19.2 (63)	Pocahontas	18	46.8 (12)	23.2 (35)
	Fremont	16	42.4 (18)	25.2 (27)	Ringgold	31	121.0 (01)	56.3 (01)
	Greene	9	18.7 (88)	11.4 (96)	Taylor	11	33.8 (39)	19.5 (60)
	Howard	12	25.2 (71)	14.9 (80)	Van Buren	15	39.2 (25)	25.4 (26)
	Humboldt	14	28.8 (55)	17.8 (70)	Wayne	20	62.8 (03)	44.1 (03)
	Ida	19	53.7 (10)	28.4 (16)	Worth	13	34.0 (37)	23.2 (35)
					<b>Total</b>	353	41.3	24.7
Counties with Average Population 10,000 – 20,000	Allamakee	26	36.1 (32)	22.9 (37)	Hardin	41	46.4 (14)	24.9 (29)
	Appanoose	26	39.7 (23)	28.0 (17)	Iowa	15	18.9 (86)	13.7 (83)
	Buena Vista	40	40.8 (21)	30.1 (12)	Jefferson	26	33.5 (40)	25.8 (21)
	Butler	26	35.4 (34)	21.1 (46)	Keokuk	18	33.3 (42)	21.5 (44)
	Calhoun	21	41.6 (19)	20.6 (48)	Kossuth	16	20.4 (83)	11.5 (95)
	Cass	38	54.6 (07)	29.6 (14)	Louisa	15	25.4 (69)	21.4 (45)
	Cedar	17	18.9 (86)	12.8 (90)	Lyon	31	54.7 (06)	34.7 (06)
	Cherokee	19	32.1 (46)	17.9 (68)	Mitchell	12	22.2 (78)	12.7 (91)
	Chickasaw	16	26.1 (67)	16.4 (76)	Montgomery	14	25.4 (69)	15.4 (79)
	Clay	28	33.5 (40)	21.8 (41)	O'Brien	27	38.2 (27)	21.1 (46)
	Clayton	28	31.5 (48)	19.8 (58)	Page	47	59.1 (05)	34.7 (06)
	Crawford	37	44.8 (15)	30.2 (11)	Poweshiek	28	30.0 (53)	17.9 (68)
	Delaware	31	35.3 (35)	25.7 (22)	Sac	14	26.8 (63)	13.7 (83)
	Dickinson	33	39.8 (22)	22.8 (38)	Shelby	21	34.0 (37)	19.5 (60)
	Emmet	28	53.8 (08)	33.9 (08)	Tama	25	28.1 (61)	17.7 (71)
	Floyd	15	18.4 (89)	12.2 (93)	Union	17	28.3 (60)	20.1 (55)
	Franklin	12	22.6 (77)	13.3 (86)	Winnebago	26	47.5 (11)	25.6 (24)
	Hamilton	30	38.2 (27)	24.5 (30)	Wright	21	31.8 (47)	20.1 (55)
	Hancock	35	61.1 (04)	39.1 (04)	<b>Total</b>	920	35.1	21.9
Counties with Average Population > 20,000	Boone	43	32.8 (43)	25.0 (28)	Lee	50	27.8 (62)	20.6 (48)
	Buchanan	40	38.3 (26)	31.3 (09)	Mahaska	29	26.2 (66)	20.4 (53)
	Carroll	22	21.1 (81)	12.4 (92)	Marion	43	26.4 (64)	19.7 (59)
	Cerro Gordo	52	23.6 (74)	16.1 (77)	Marshall	50	25.6 (68)	19.0 (65)
	Clinton	80	32.5 (44)	23.3 (34)	Muscatine	42	19.9 (84)	19.4 (62)
	Des Moines	23	11.3 (96)	7.9 (99)	Plymouth	44	36.0 (33)	26.6 (20)
	Fayette	22	21.3 (80)	12.9 (89)	Sioux	27	16.9 (90)	13.3 (86)
	Henry	29	28.8 (55)	21.7 (43)	Wapello	47	26.4 (64)	19.1 (64)
	Jackson	30	30.1 (52)	20.6 (48)	Webster	60	31.1 (49)	22.5 (39)
	Jasper	57	31.0 (50)	23.4 (33)	Winneshiek	25	24.0 (73)	15.9 (78)
					<b>Total</b>	815	26.2	19.2
MSA Counties	Benton	31	23.3 (76)	18.7 (67)	Linn	255	25.2 (71)	23.9 (32)
	Black Hawk	130	20.5 (82)	17.7 (71)	Madison	12	15.9 (94)	13.1 (88)
	Bremer	19	16.2 (92)	11.9 (94)	Mills	7	9.3 (99)	8.9 (98)
	Dallas	43	15.8 (95)	20.0 (57)	Polk	331	16.2 (92)	17.2 (73)
	Dubuque	75	16.4 (91)	13.6 (85)	Pottawattamie	128	28.7 (57)	25.6 (24)
	Grundy	23	37.8 (30)	22.2 (40)	Scott	157	19.4 (85)	19.0 (65)
	Guthrie	26	46.7 (13)	30.0 (13)	Story	41	9.8 (98)	10.4 (97)
	Harrison	33	42.7 (17)	29.1 (15)	Warren	48	22.0 (79)	20.6 (48)
	Johnson	61	9.9 (97)	14.0 (82)	Washington	47	44.5 (16)	27.7 (18)
	Jones	35	34.4 (36)	25.7 (22)	Woodbury	155	30.5 (51)	27.5 (19)
					<b>Total</b>	1,657	20.1	19.4
	<b>State Total</b>	3,745	25.3	20.4				

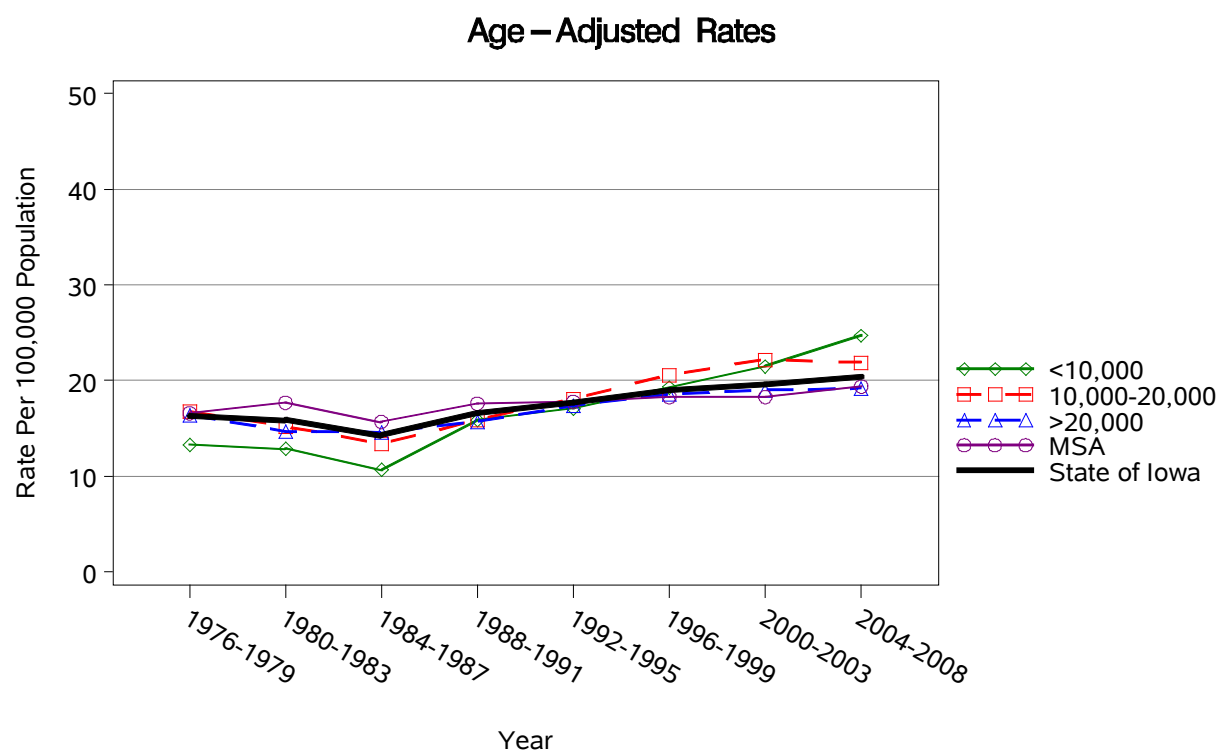
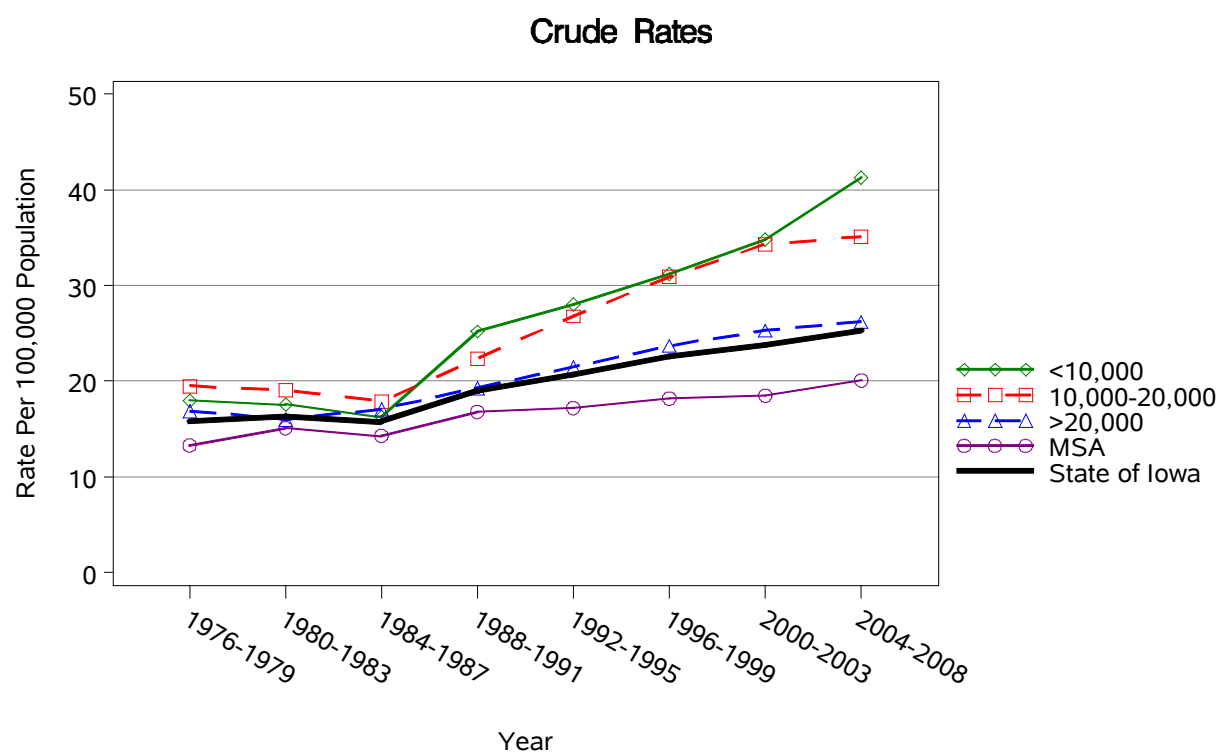
<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population<sup>3</sup>Rank among 99 counties

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* represents a count less than 5



# Diabetes Mellitus Mortality by County Group 1976-2008



## Infectious/Parasitic Mortality 2004-2008

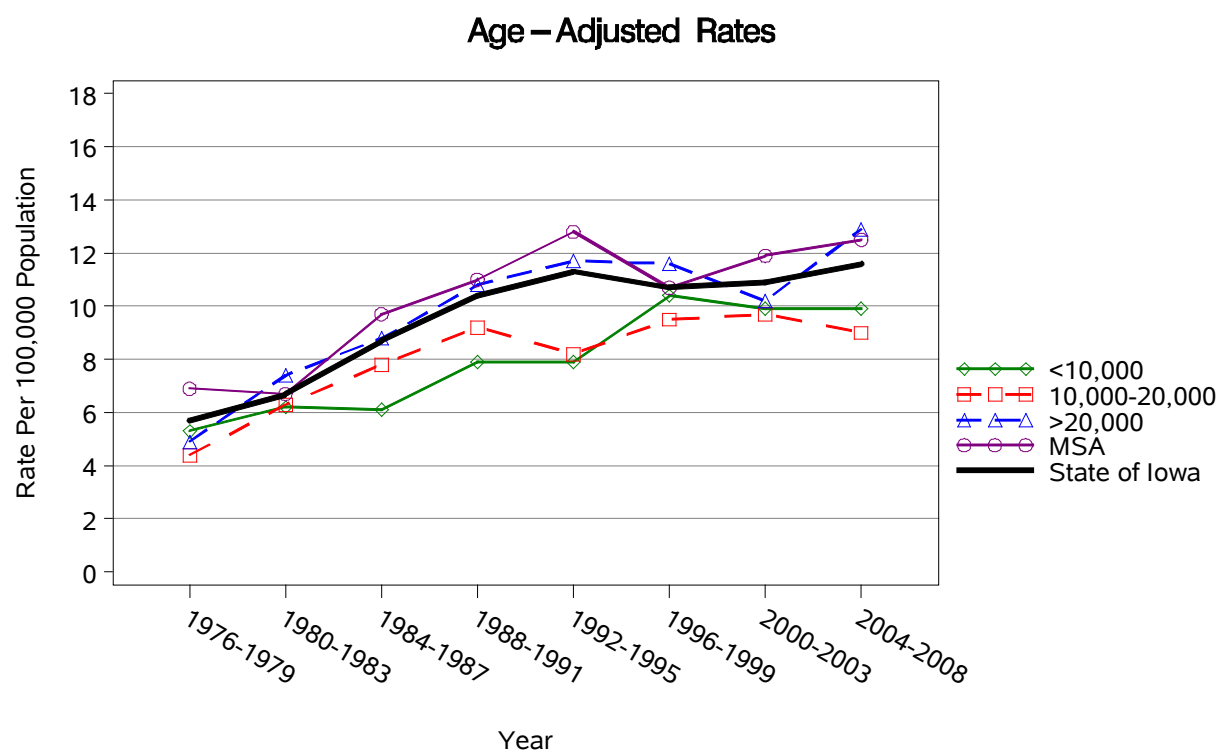
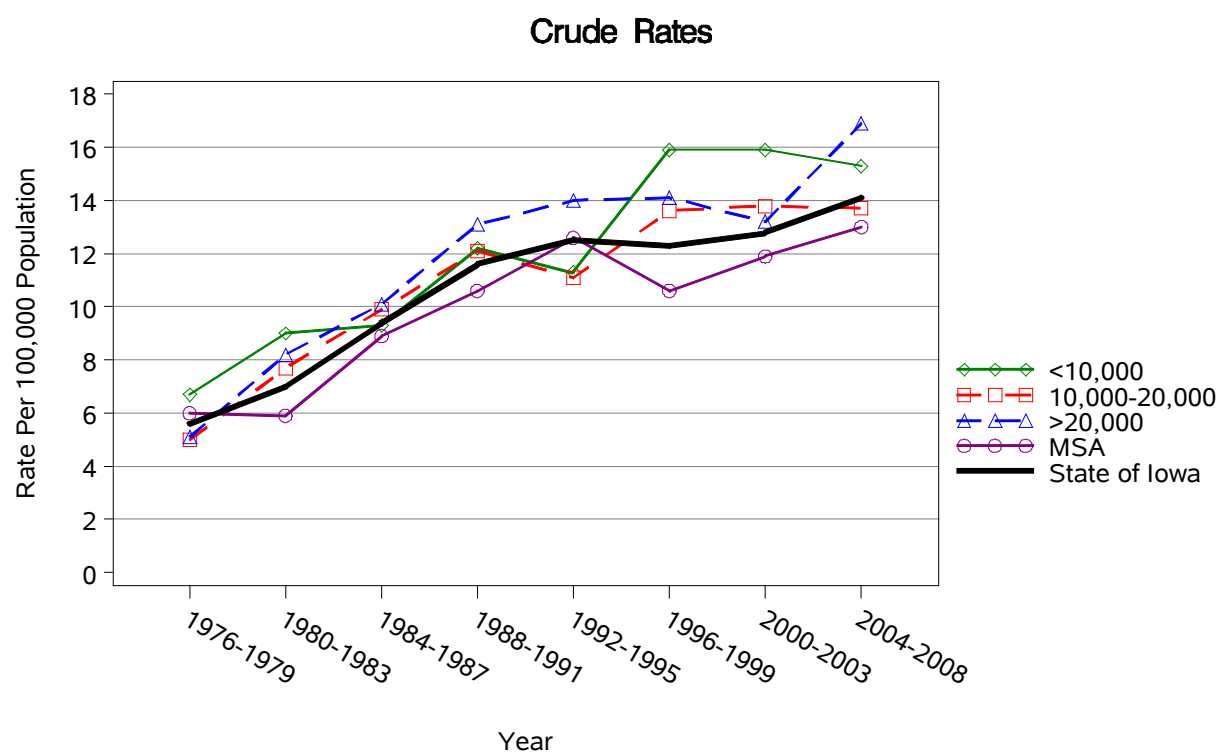
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	6	15.7	9.7	Lucas	9	19	12.6
	Adams	6	29	21	Monona	14	30.3	17.2
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	5	11	8.1	Osceola	*	*	*
	Davis	6	14	11.1	Palo Alto	6	12.7	9.6
	Decatur	10	23.9	19.4	Pocahontas	*	*	*
	Fremont	6	15.9	11.1	Ringgold	*	*	*
	Greene	12	24.9	17.7	Taylor	6	18.5	11
	Howard	*	*	*	Van Buren	5	13.1	7.1
	Humboldt	7	14.4	7.6	Wayne	5	15.7	10.1
	Ida	6	17	9.7	Worth	*	*	*
					<b>Total</b>	<b>131</b>	<b>15.3</b>	<b>9.9</b>
Counties with Average Population 10,000 – 20,000	Allamakee	11	15.3	10.7	Hardin	10	11.3	6.8
	Appanoose	*	*	*	Iowa	7	8.8	4.9
	Buena Vista	16	16.3	11.6	Jefferson	8	10.3	8.1
	Butler	6	8.2	5	Keokuk	11	20.3	13.4
	Calhoun	8	15.8	8	Kossuth	10	12.7	10.1
	Cass	7	10.1	6.6	Louisa	8	13.5	10.7
	Cedar	17	18.9	13.5	Lyon	7	12.3	9
	Cherokee	8	13.5	8.3	Mitchell	*	*	*
	Chickasaw	5	8.2	5	Montgomery	15	27.2	15.7
	Clay	19	22.7	17.3	O'Brien	13	18.4	11
	Clayton	14	15.7	10.5	Page	18	22.6	14.4
	Crawford	14	16.9	14.6	Poweshiek	8	8.6	6.4
	Delaware	9	10.2	6.6	Sac	10	19.2	11.6
	Dickinson	5	6	3.7	Shelby	14	22.7	11.5
	Emmet	6	11.5	7.5	Tama	11	12.4	7.8
	Floyd	9	11.1	7.7	Union	11	18.3	14.2
	Franklin	*	*	*	Winnebago	9	16.4	9
	Hamilton	7	8.9	5.7	Wright	8	12.1	7.1
	Hancock	9	15.7	10.8	<b>Total</b>	<b>358</b>	<b>13.7</b>	<b>9</b>
Counties with Average Population > 20,000	Boone	20	15.2	12	Lee	54	30	22.2
	Buchanan	14	13.4	10.7	Mahaska	9	8.1	7.3
	Carroll	18	17.3	10.4	Marion	32	19.7	13.7
	Cerro Gordo	33	15	11.6	Marshall	50	25.6	20.6
	Clinton	42	17.1	13.2	Muscatine	34	16.1	15.1
	Des Moines	22	10.8	8.1	Plymouth	10	8.2	6.6
	Fayette	16	15.5	10.8	Sioux	23	14.4	10.9
	Henry	12	11.9	9.2	Wapello	41	23.1	17.8
	Jackson	15	15	10.9	Webster	47	24.4	17.9
	Jasper	26	14.1	10.6	Winneshek	8	7.7	5.8
					<b>Total</b>	<b>526</b>	<b>16.9</b>	<b>12.9</b>
MSA Counties	Benton	15	11.3	9.4	Linn	149	14.7	13.8
	Black Hawk	95	15	13	Madison	10	13.2	11.8
	Bremer	18	15.3	10.4	Mills	17	22.7	19.5
	Dallas	26	9.5	12.6	Polk	292	14.3	14.8
	Dubuque	43	9.4	7.7	Pottawattamie	85	19	17
	Grundy	6	9.9	4.8	Scott	91	11.3	10.9
	Guthrie	6	10.8	7.7	Story	24	5.7	6
	Harrison	9	11.6	8.9	Warren	24	11	10
	Johnson	44	7.1	9.8	Washington	15	14.2	9.1
	Jones	16	15.7	12.2	Woodbury	86	16.9	15.2
					<b>Total</b>	<b>1,071</b>	<b>13</b>	<b>12.5</b>
	<b>State Total</b>	<b>2,086</b>	<b>14.1</b>	<b>11.6</b>				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* represents a count less than 5

# Infectious/Parasitic Mortality by County Group 1976-2008



# Nephritis, Nephrotic Syndrome, Nephrosis Mortality 2004-2008

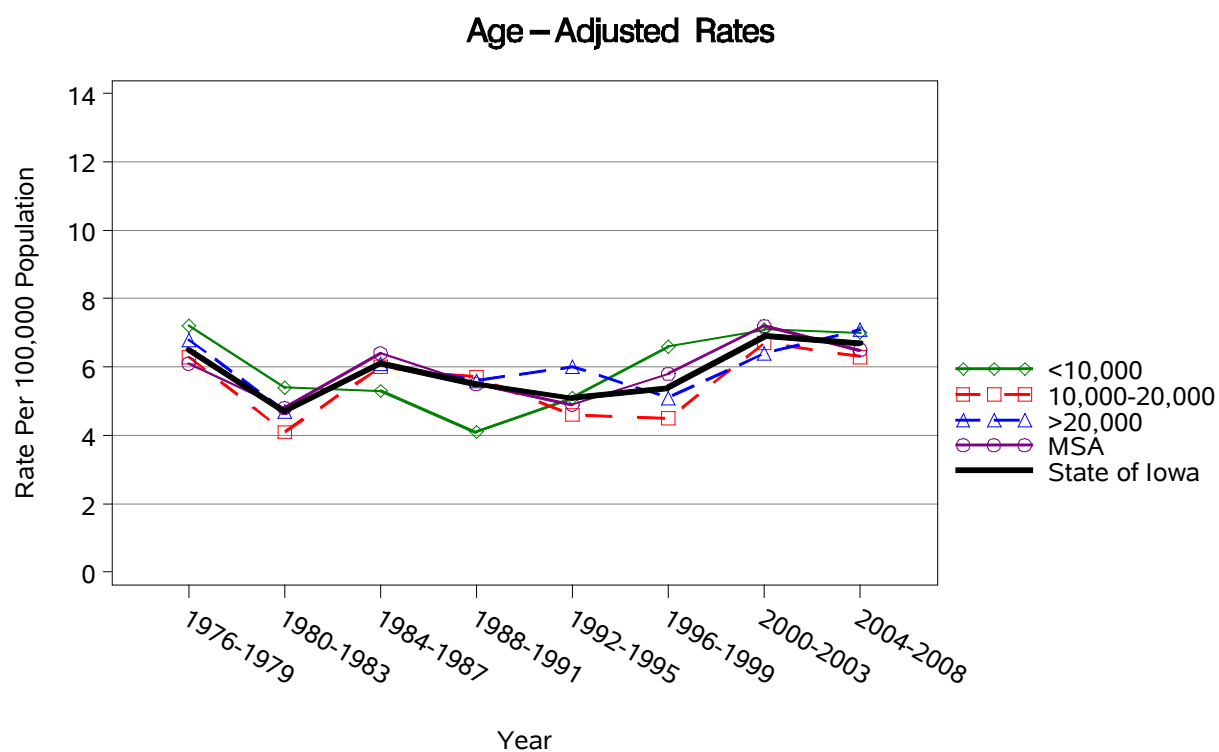
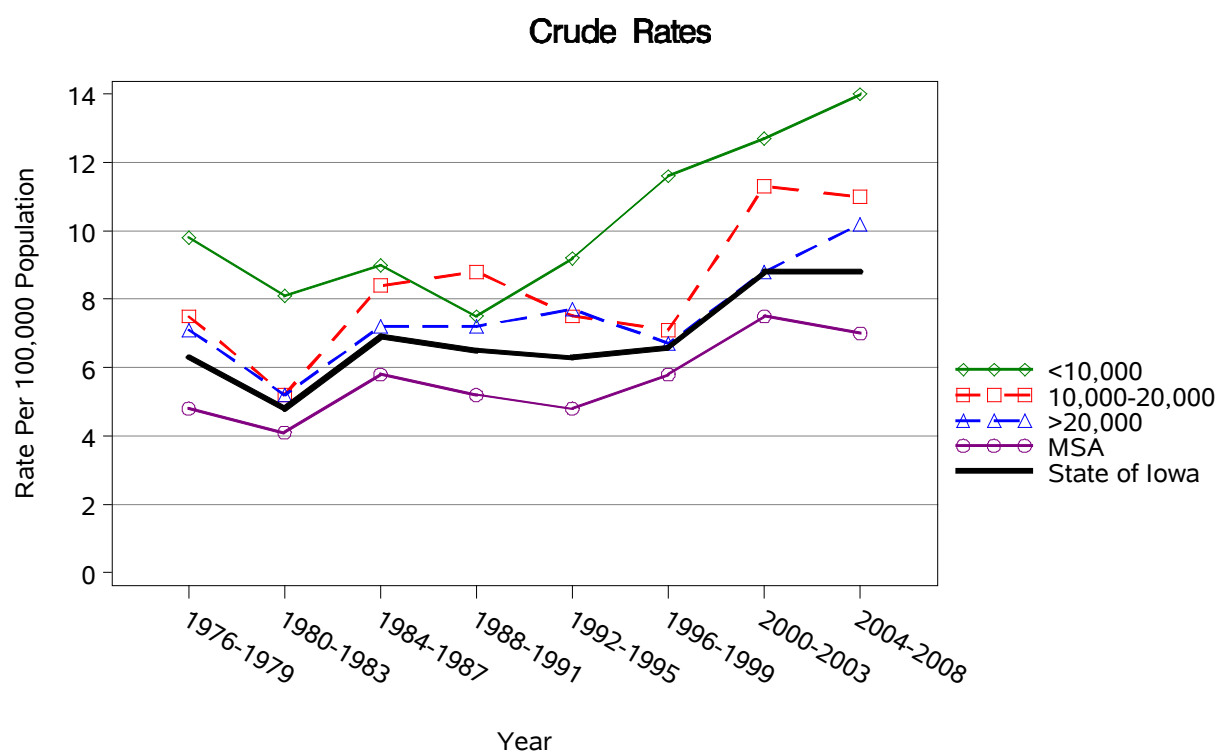
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	12	31.4	12.9	Lucas	5	10.5	5.4
	Adams	*	*	*	Monona	14	30.3	12.1
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	6	13.2	9.6	Osceola	*	*	*
	Davis	5	11.7	7.8	Palo Alto	*	*	*
	Decatur	9	21.5	12.8	Pocahontas	*	*	*
	Fremont	10	26.5	12.6	Ringgold	*	*	*
	Greene	*	*	*	Taylor	6	18.5	9.2
	Howard	9	18.9	9.6	Van Buren	5	13.1	7
	Humboldt	8	16.4	8.3	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	120	14	7
Counties with Average Population 10,000 – 20,000	Allamakee	13	18	11.3	Hardin	13	14.7	7
	Appanoose	5	7.6	4.8	Iowa	9	11.4	6.6
	Buena Vista	*	*	*	Jefferson	7	9	7.9
	Butler	14	19.1	10.3	Keokuk	8	14.8	7.8
	Calhoun	6	11.9	5.4	Kossuth	7	8.9	4.5
	Cass	10	14.4	7.4	Louisa	*	*	*
	Cedar	6	6.7	5.1	Lyon	9	15.9	9.9
	Cherokee	12	20.3	10.4	Mitchell	6	11.1	6.4
	Chickasaw	*	*	*	Montgomery	10	18.1	9.8
	Clay	16	19.1	12	O'Brien	11	15.6	6.5
	Clayton	10	11.2	5.7	Page	14	17.6	9.4
	Crawford	9	10.9	6.9	Poweshiek	7	7.5	4.3
	Delaware	8	9.1	5.8	Sac	7	13.4	5
	Dickinson	13	15.7	8	Shelby	6	9.7	5.5
	Emmet	*	*	*	Tama	5	5.6	3.1
	Floyd	8	9.8	6	Union	7	11.7	6
	Franklin	*	*	*	Winnebago	5	9.1	5.8
	Hamilton	7	8.9	5.5	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	288	11	6.3
Counties with Average Population > 20,000	Boone	20	15.2	9.9	Lee	29	16.1	11
	Buchanan	14	13.4	9.6	Mahaska	9	8.1	6
	Carroll	8	7.7	4.4	Marion	17	10.4	6.9
	Cerro Gordo	15	6.8	4.4	Marshall	23	11.8	8.4
	Clinton	29	11.8	8	Muscatine	10	4.7	4.7
	Des Moines	22	10.8	7.2	Plymouth	12	9.8	6.6
	Fayette	20	19.4	10.5	Sioux	13	8.1	4.8
	Henry	6	6	5.2	Wapello	16	9	6.5
	Jackson	8	8	5.6	Webster	17	8.8	6.6
	Jasper	22	12	8.8	Winneshiek	8	7.7	5.4
					<b>Total</b>	318	10.2	7.1
MSA Counties	Benton	9	6.8	4.4	Linn	66	6.5	5.9
	Black Hawk	62	9.8	7.3	Madison	7	9.3	6.6
	Bremer	10	8.5	5.5	Mills	6	8	6.4
	Dallas	15	5.5	7.3	Polk	117	5.7	6.1
	Dubuque	34	7.4	5.8	Pottawattamie	43	9.6	8.8
	Grundy	12	19.7	11.1	Scott	61	7.6	7.2
	Guthrie	6	10.8	6	Story	23	5.5	5.4
	Harrison	8	10.4	6.6	Warren	7	3.2	2.8
	Johnson	22	3.6	4.9	Washington	7	6.6	5
	Jones	7	6.9	4.9	Woodbury	56	11	9.9
					<b>Total</b>	578	7	6.5
<b>State Total</b>		1304	8.8	6.7				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\*represents a count less than 5

# Nephritis, Nephrotic Syndrome, Nephrosis Mortality by County Group 1976-2008



## Atherosclerosis Mortality 2004-2008

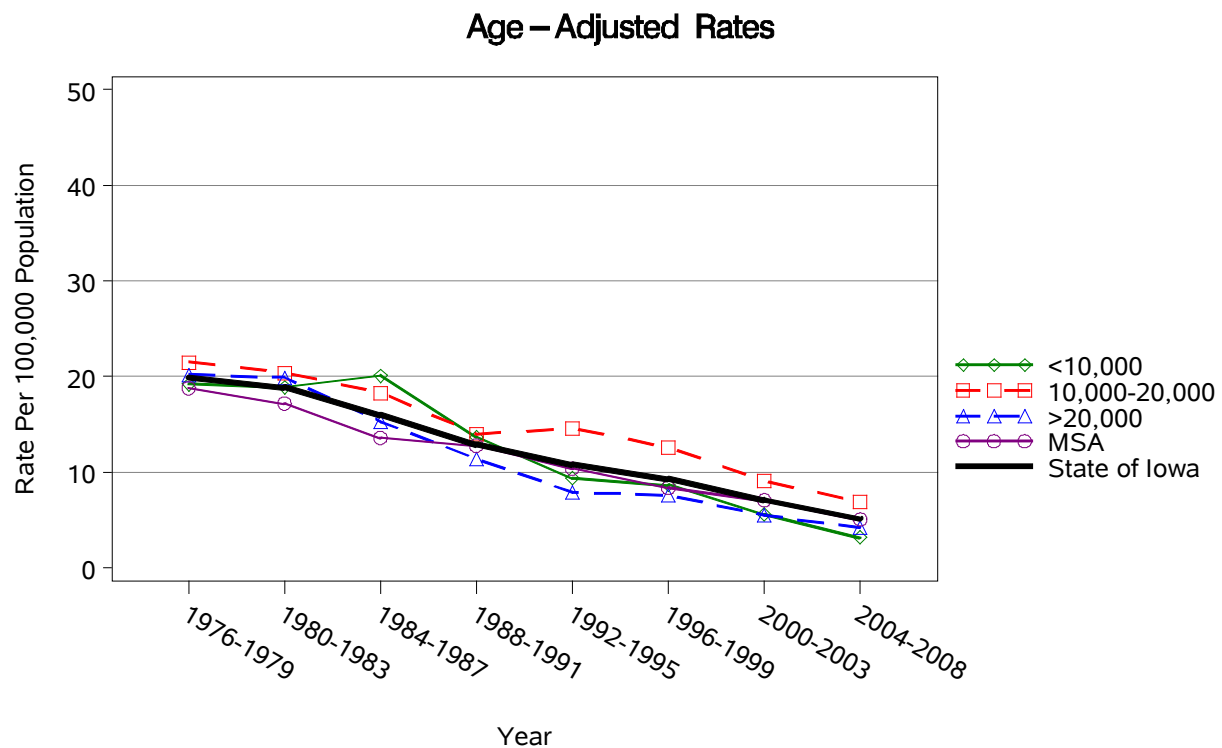
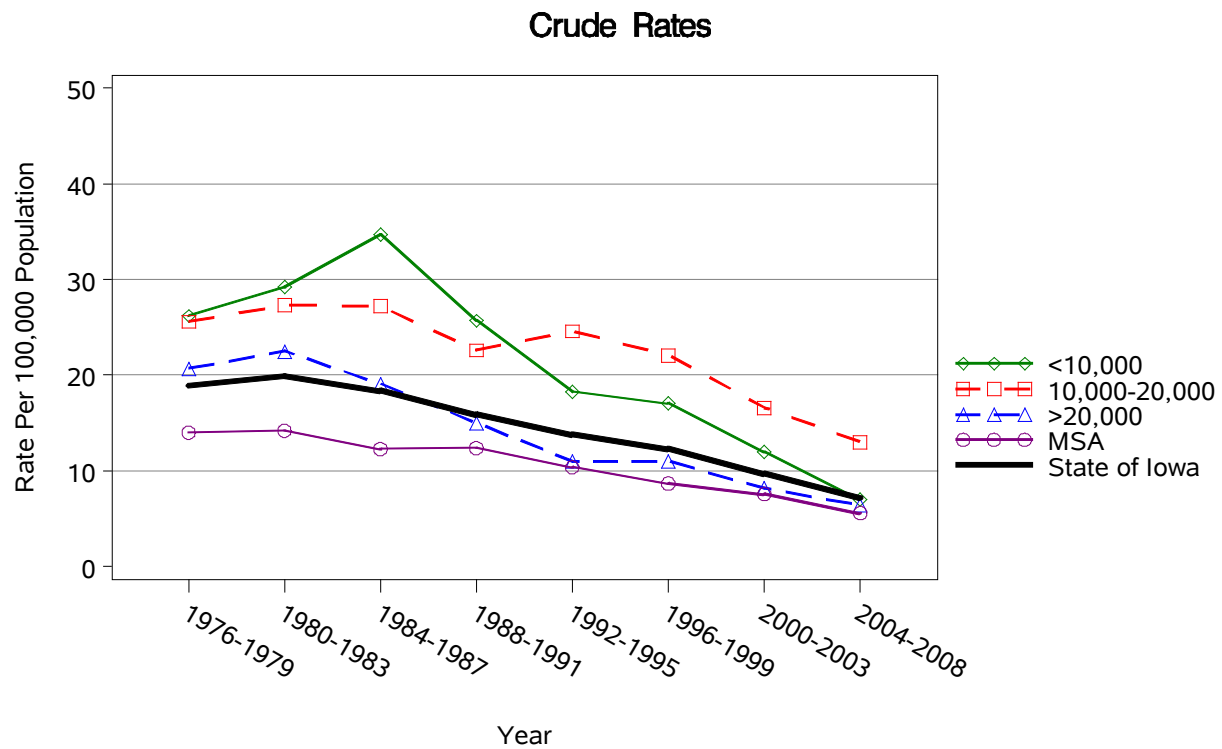
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	16	41.8	14.3	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	9	23.5	12.2
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	6	14.3	8.7	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	60	7	3.2
Counties with Average Population 10,000 – 20,000	Allamakee	10	13.9	8.3	Hardin	6	6.8	2.9
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	6	7.7	5.8
	Butler	15	20.5	10.8	Keokuk	*	*	*
	Calhoun	5	9.9	4	Kossuth	40	51	25.3
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	21	35.5	16.2	Mitchell	*	*	*
	Chickasaw	7	11.4	6.6	Montgomery	6	10.9	5.5
	Clay	5	6	3.4	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	5	5.4	2.9
	Delaware	*	*	*	Sac	8	15.3	6.7
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	130	159.9	83.5	Union	*	*	*
	Franklin	37	69.7	36.7	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	340	13	6.9
Counties with Average Population > 20,000	Boone	6	4.6	2.7	Lee	10	5.6	3.8
	Buchanan	*	*	*	Mahaska	42	38	27.9
	Carroll	6	5.8	2.6	Marion	15	9.2	5.6
	Cerro Gordo	*	*	*	Marshall	8	4.1	2.6
	Clinton	22	8.9	6.1	Muscatine	5	2.4	2.2
	Des Moines	*	*	*	Plymouth	33	27	19.3
	Fayette	6	5.8	3.1	Sioux	*	*	*
	Henry	6	6	4.2	Wapello	*	*	*
	Jackson	12	12	7.1	Webster	*	*	*
	Jasper	12	6.5	4.5	Winnesiek	*	*	*
					<b>Total</b>	200	6.4	4.2
MSA Counties	Benton	*	*	*	Linn	27	2.7	2.3
	Black Hawk	17	2.7	2.1	Madison	*	*	*
	Bremer	20	17	10.7	Mills	*	*	*
	Dallas	6	2.2	3	Polk	73	3.6	3.6
	Dubuque	53	11.6	8.3	Pottawattamie	18	4	3.5
	Grundy	*	*	*	Scott	94	11.6	11.2
	Guthrie	80	143.7	80.3	Story	7	1.7	1.6
	Harrison	*	*	*	Warren	24	11	10.2
	Johnson	12	1.9	2.9	Washington	12	11.4	5.7
	Jones	*	*	*	Woodbury	16	3.1	2.7
					<b>Total</b>	463	5.6	5.1
	<b>State Total</b>	1,063	7.2	5.2				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* represents a count less than 5

# Atherosclerosis Mortality by County Group 1976-2008



# Chronic Liver Disease and Cirrhosis Mortality 2004-2008

	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	6	12.6	10.7
	Adams	*	*	*	Monona	12	26	18.3
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	6	13.2	10.4	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	5	10.6	9.4
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	5	10.5	8.7	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	<b>77</b>	<b>9</b>	<b>6.9</b>
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	5	5.7	4
	Appanoose	5	7.6	6.1	Iowa	7	8.8	8.3
	Buena Vista	*	*	*	Jefferson	6	7.7	6.5
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	5	7.2	5.3	Louisa	*	*	*
	Cedar	*	*	*	Lyon	6	10.6	8
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	6	7.2	6.4	O'Brien	*	*	*
	Clayton	7	7.9	5.5	Page	5	6.3	4.5
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	6	11.5	8.9
	Dickinson	12	14.5	10.3	Shelby	*	*	*
	Emmet	5	9.6	8.7	Tama	8	9	7.8
	Floyd	*	*	*	Union	6	10	8
	Franklin	5	9.4	6.2	Winnebago	5	9.1	8.2
	Hamilton	5	6.4	5	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	<b>165</b>	<b>6.3</b>	<b>4.9</b>
Counties with Average Population > 20,000	Boone	7	5.3	4.5	Lee	15	8.3	6.5
	Buchanan	6	5.7	5.2	Mahaska	*	*	*
	Carroll	*	*	*	Marion	11	6.8	5.9
	Cerro Gordo	15	6.8	6	Marshall	23	11.8	9.5
	Clinton	16	6.5	5.4	Muscatine	9	4.3	4.1
	Des Moines	17	8.4	6.7	Plymouth	6	4.9	4.6
	Fayette	7	6.8	5.2	Sioux	5	3.1	2.9
	Henry	5	5	4.6	Wapello	11	6.2	5
	Jackson	5	5	3.8	Webster	21	10.9	9.1
	Jasper	13	7.1	6.5	Winneshiek	*	*	*
					<b>Total</b>	<b>200</b>	<b>6.4</b>	<b>5.5</b>
MSA Counties	Benton	9	6.8	5.7	Linn	76	7.5	7.3
	Black Hawk	46	7.3	7	Madison	12	15.9	14
	Bremer	9	7.7	6.1	Mills	*	*	*
	Dallas	9	3.3	3.9	Polk	156	7.6	7.8
	Dubuque	26	5.7	5.2	Pottawattamie	32	7.2	6.3
	Grundy	*	*	*	Scott	66	8.2	7.7
	Guthrie	8	14.4	10.3	Story	19	4.5	5.6
	Harrison	*	*	*	Warren	11	5	4.6
	Johnson	12	1.9	2.6	Washington	5	4.7	3.7
	Jones	5	4.9	4.3	Woodbury	61	12	11.6
					<b>Total</b>	<b>571</b>	<b>6.9</b>	<b>6.8</b>
<b>State Total</b>		<b>1,013</b>	<b>6.8</b>	<b>6.1</b>				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

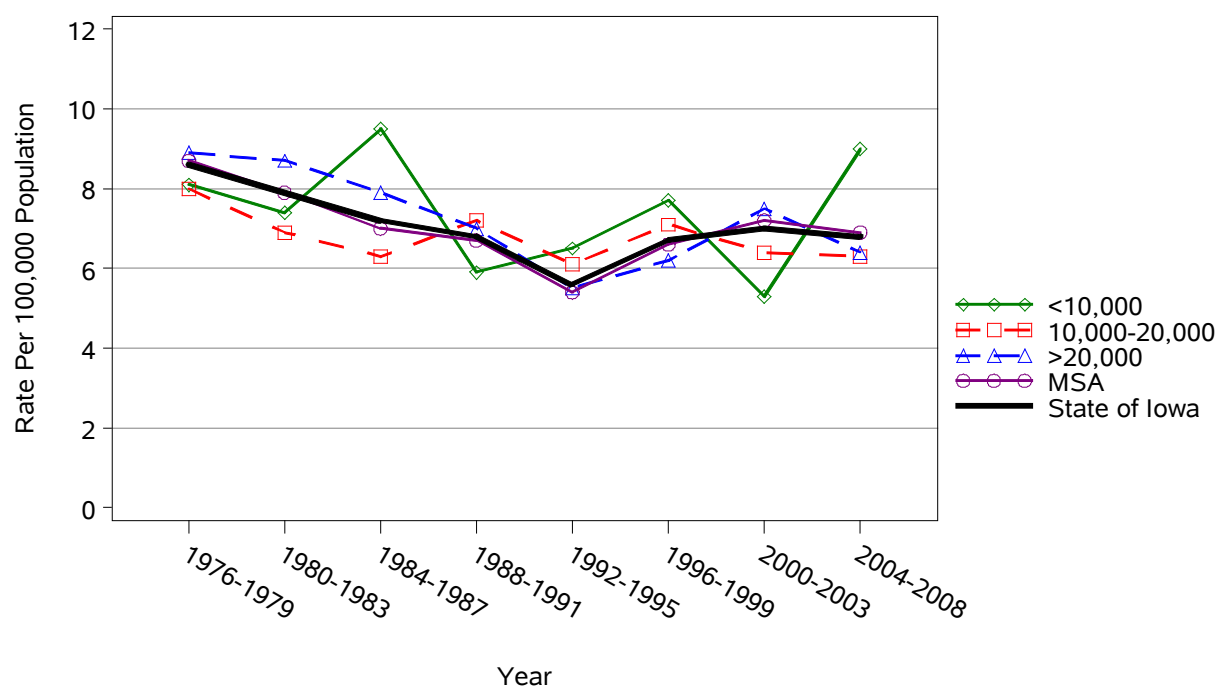
Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* represents a count less than 5

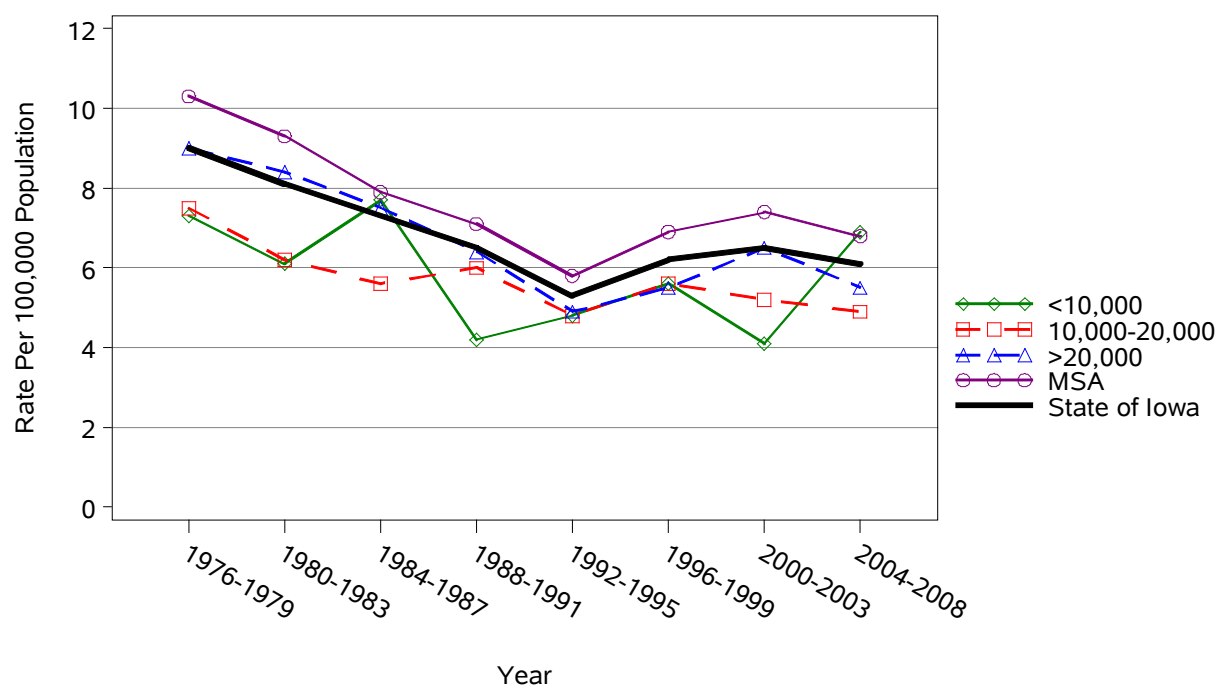


# Chronic Liver Disease and Cirrhosis Mortality by County Group 1976-2008

Crude Rates



Age-Adjusted Rates



# Congenital Anomalies Mortality 2004-2008

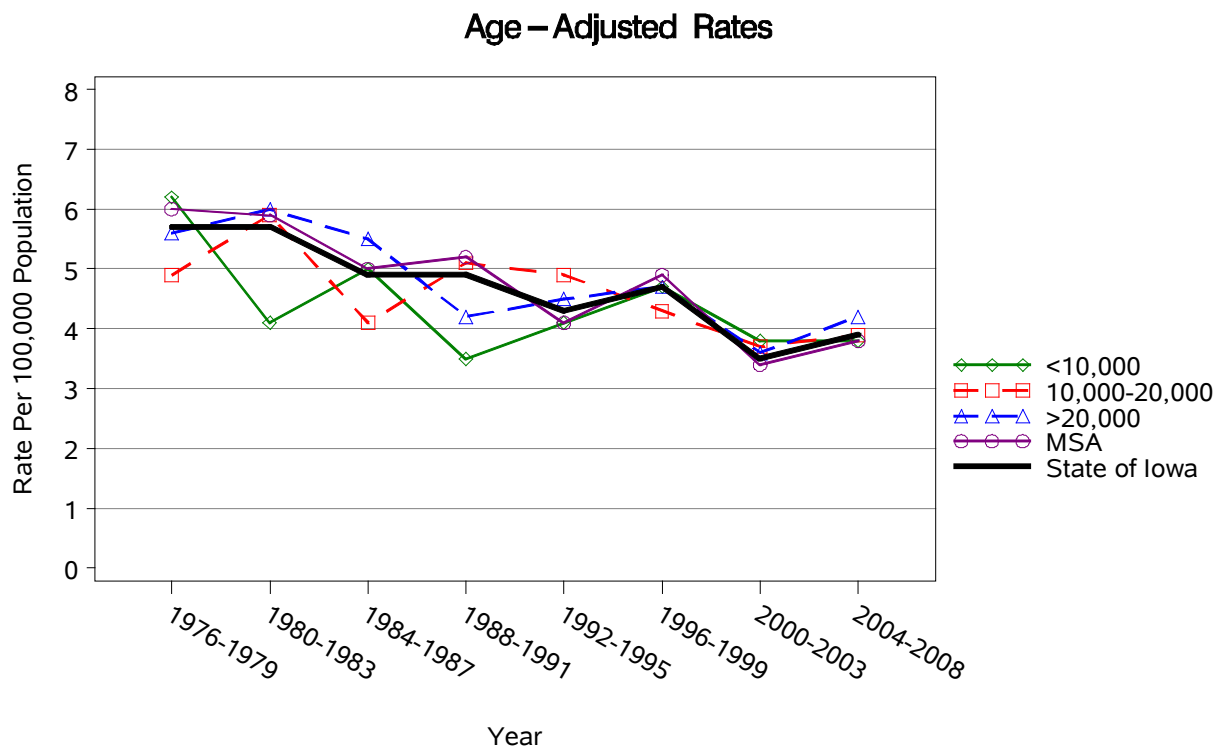
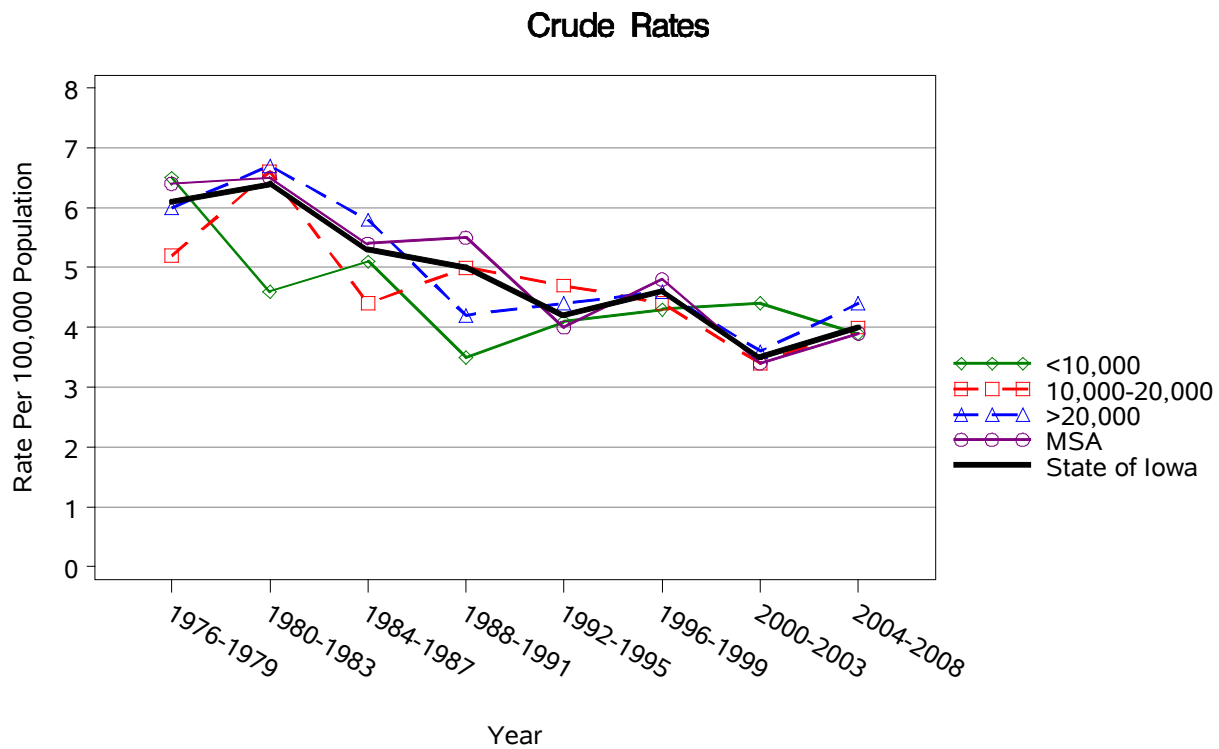
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	33	3.9	3.8
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	6	7.6	7.4
	Buena Vista	*	*	*	Jefferson	6	7.7	5.5
	Butler	6	8.2	9.2	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	*	*	*	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	7	12.8	17.2
	Hamilton	6	7.6	7.2	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	104	4	3.9
Counties with Average Population > 20,000	Boone	*	*	*	Lee	6	3.3	4.1
	Buchanan	6	5.7	6	Mahaska	5	4.5	4.2
	Carroll	8	7.7	6.8	Marion	15	9.2	8.1
	Cerro Gordo	15	6.8	6.5	Marshall	5	2.6	2.1
	Clinton	12	4.9	5.2	Muscatine	9	4.3	4.1
	Des Moines	6	3	2.9	Plymouth	6	4.9	5.8
	Fayette	*	*	*	Sioux	9	5.6	5.1
	Henry	*	*	*	Wapello	6	3.4	2.9
	Jackson	6	6	6.1	Webster	*	*	*
	Jasper	7	3.8	3.5	Winneshiek	*	*	*
					<b>Total</b>	136	4.4	4.2
MSA Counties	Benton	5	3.8	3.6	Linn	41	4	4
	Black Hawk	19	3	3	Madison	*	*	*
	Bremer	6	5.1	6	Mills	*	*	*
	Dallas	8	2.9	3.2	Polk	88	4.3	3.8
	Dubuque	17	3.7	3.8	Pottawattamie	17	3.8	3.9
	Grundy	*	*	*	Scott	30	3.7	3.7
	Guthrie	*	*	*	Story	11	2.6	3.3
	Harrison	*	*	*	Warren	7	3.2	3.5
	Johnson	22	3.6	4.2	Washington	8	7.6	7
	Jones	*	*	*	Woodbury	26	5.1	4.6
					<b>Total</b>	318	3.9	3.8
	<b>State Total</b>	591	4	3.9				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* represents a count less than 5

# Congenital Anomalies Mortality by County Group 1976-2008



# Conditions Originating in Perinatal Period Mortality 2004-2008

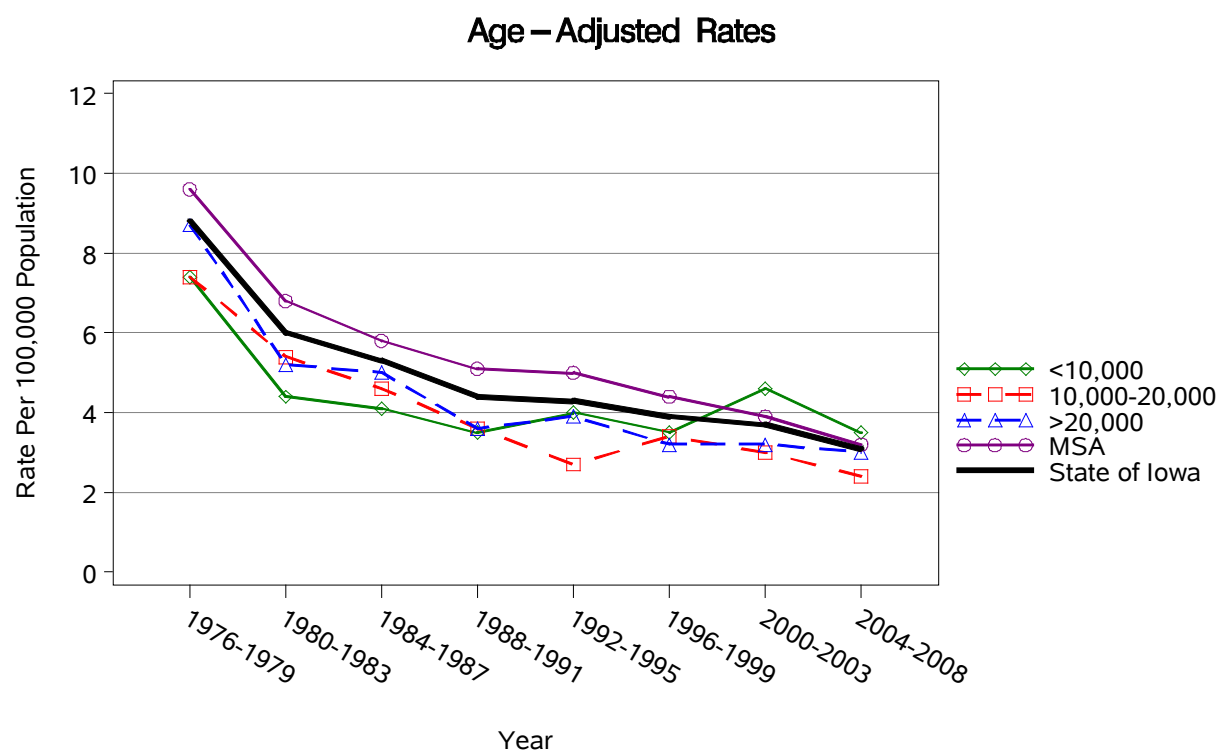
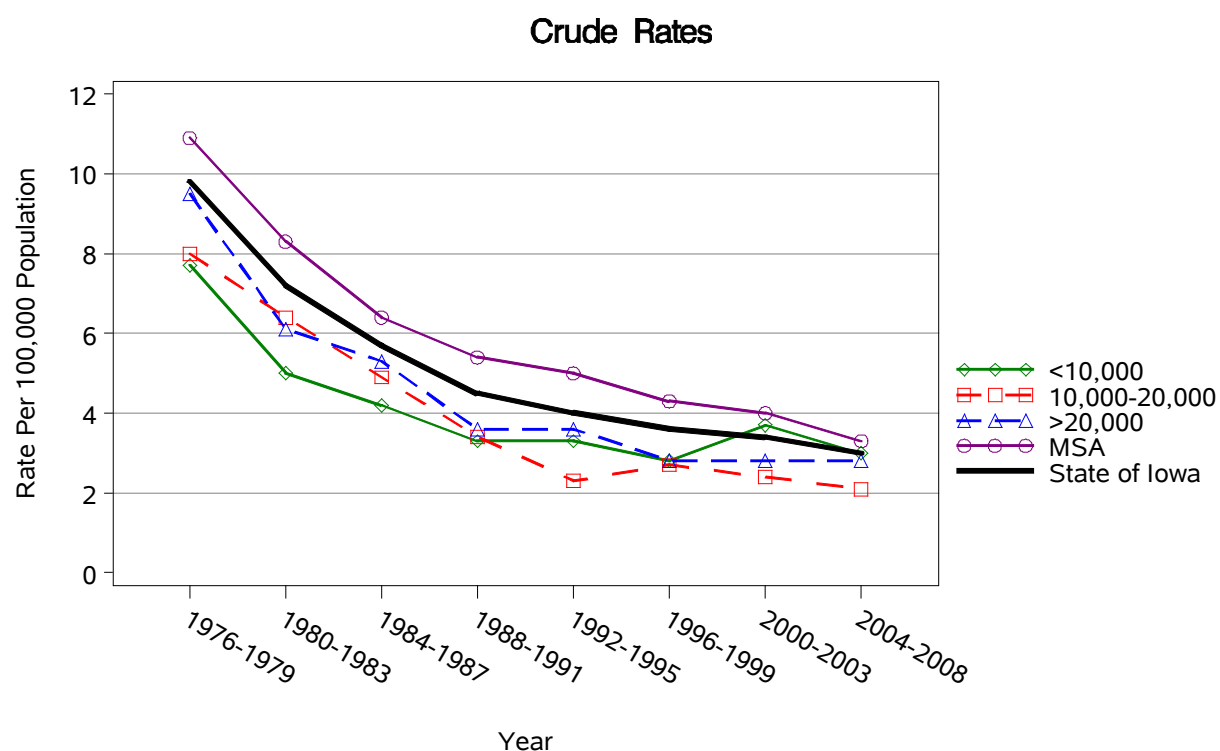
	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>	County	#	Crude <sup>1</sup>	Adjusted <sup>1,2</sup>
Counties with Average Population < 10,000	Adair	*	*	*	Lucas	*	*	*
	Adams	*	*	*	Monona	*	*	*
	Audubon	*	*	*	Monroe	*	*	*
	Clarke	*	*	*	Osceola	*	*	*
	Davis	*	*	*	Palo Alto	*	*	*
	Decatur	*	*	*	Pocahontas	*	*	*
	Fremont	*	*	*	Ringgold	*	*	*
	Greene	*	*	*	Taylor	*	*	*
	Howard	*	*	*	Van Buren	*	*	*
	Humboldt	*	*	*	Wayne	*	*	*
	Ida	*	*	*	Worth	*	*	*
					<b>Total</b>	26	3	3.5
Counties with Average Population 10,000 – 20,000	Allamakee	*	*	*	Hardin	*	*	*
	Appanoose	*	*	*	Iowa	*	*	*
	Buena Vista	*	*	*	Jefferson	*	*	*
	Butler	*	*	*	Keokuk	*	*	*
	Calhoun	*	*	*	Kossuth	*	*	*
	Cass	*	*	*	Louisa	*	*	*
	Cedar	*	*	*	Lyon	*	*	*
	Cherokee	*	*	*	Mitchell	*	*	*
	Chickasaw	*	*	*	Montgomery	*	*	*
	Clay	*	*	*	O'Brien	*	*	*
	Clayton	*	*	*	Page	*	*	*
	Crawford	*	*	*	Poweshiek	*	*	*
	Delaware	*	*	*	Sac	*	*	*
	Dickinson	*	*	*	Shelby	*	*	*
	Emmet	6	11.5	12	Tama	*	*	*
	Floyd	*	*	*	Union	*	*	*
	Franklin	*	*	*	Winnebago	*	*	*
	Hamilton	*	*	*	Wright	*	*	*
	Hancock	*	*	*	<b>Total</b>	55	2.1	2.4
Counties with Average Population > 20,000	Boone	*	*	*	Lee	*	*	*
	Buchanan	7	6.7	6.3	Mahaska	6	5.4	5.6
	Carroll	*	*	*	Marion	*	*	*
	Cerro Gordo	8	3.6	4.4	Marshall	*	*	*
	Clinton	10	4.1	4.5	Muscatine	5	2.4	2.2
	Des Moines	7	3.4	3.7	Plymouth	*	*	*
	Fayette	*	*	*	Sioux	7	4.4	3.9
	Henry	*	*	*	Wapello	*	*	*
	Jackson	*	*	*	Webster	*	*	*
	Jasper	*	*	*	Winneshiek	*	*	*
					<b>Total</b>	86	2.8	3
MSA Counties	Benton	*	*	*	Linn	38	3.7	3.7
	Black Hawk	17	2.7	2.7	Madison	*	*	*
	Bremer	*	*	*	Mills	*	*	*
	Dallas	6	2.2	2	Polk	89	4.4	3.6
	Dubuque	8	1.7	1.8	Pottawattamie	22	4.9	4.9
	Grundy	*	*	*	Scott	29	3.6	3.5
	Guthrie	*	*	*	Story	10	2.4	2.9
	Harrison	*	*	*	Warren	5	2.3	2.6
	Johnson	19	3.1	3.3	Washington	*	*	*
	Jones	*	*	*	Woodbury	18	3.5	3
					<b>Total</b>	273	3.3	3.2
<b>State Total</b>		440	3	3.1				

<sup>1</sup>Rates per 100,000 population<sup>2</sup>Adjusted to year 2000 population

Source: State Health Registry of Iowa via NCI's SEER\*Stat Program

\* represents a count less than 5

# Conditions Originating in Perinatal Period Mortality by County Group 1976-2008





## Health Care Providers

The Office of Statewide Clinical Education Programs (OSCEP) at the University of Iowa Carver College of Medicine, the Iowa Department of Public Health, Board of Nursing, and the Bureau of Emergency Medical Services collect the health care provider data presented in this Iowa Health Fact Book.

The Iowa Health Professions Tracking Center, staffed by OSCEP, provides an up-to-date inventory of physicians, physician assistants, advanced registered nurse practitioners, pharmacists, and dentists, which facilitates tracking trends in Iowa health professionals and provides feedback to the health science colleges on the progress of their programs.

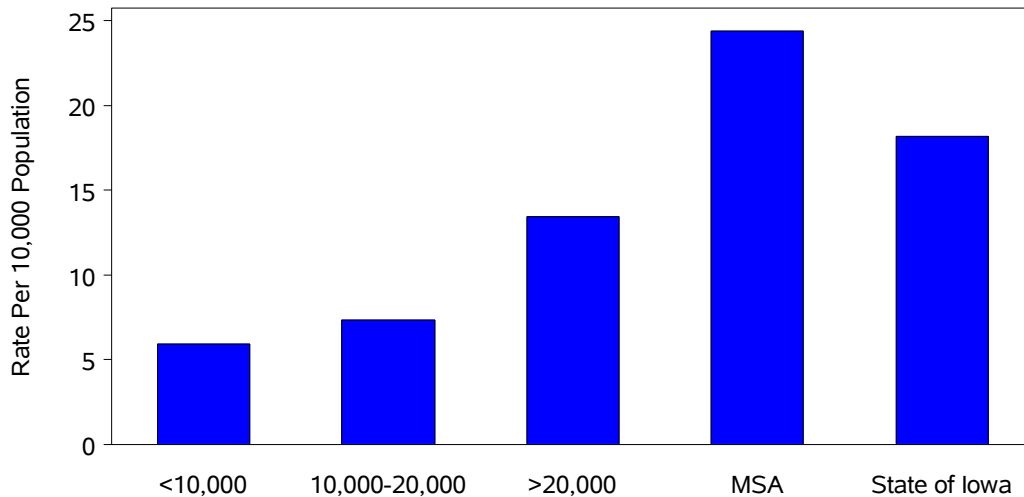
The Board of Nursing enforces and regulates nursing education, nursing practice, and continuing education for nurses. It sets standards, provides evaluation and licensing, and investigates complaints about licensed practical nurses, registered nurses, and advanced registered nurse practitioners. Its mission is “to protect the public health, safety and welfare of Iowans by ensuring that nursing is practiced by competent licensed individuals within their practice field.” Data related to the nursing supply are housed within the Board of Nursing.

The Bureau of Emergency Medical Services (EMS) is a regulatory agency that establishes initial training, continuing education, and renewal requirements leading to certification of emergency medical care providers, including those presented here. The EMS Bureau is also responsible for the authorization and regulation of EMS service programs (levels First Responder through Paramedic), and a statewide trauma system. In addition, the Bureau has statewide programs dealing with system development initiatives, injury prevention, and emergency medical services for children.

Seventeen other licensing boards are housed at the Iowa Department of Public Health, which collect data about practice, licensing/certification, and other supply information.

## THE 2011 IOWA HEALTH FACT BOOK

Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

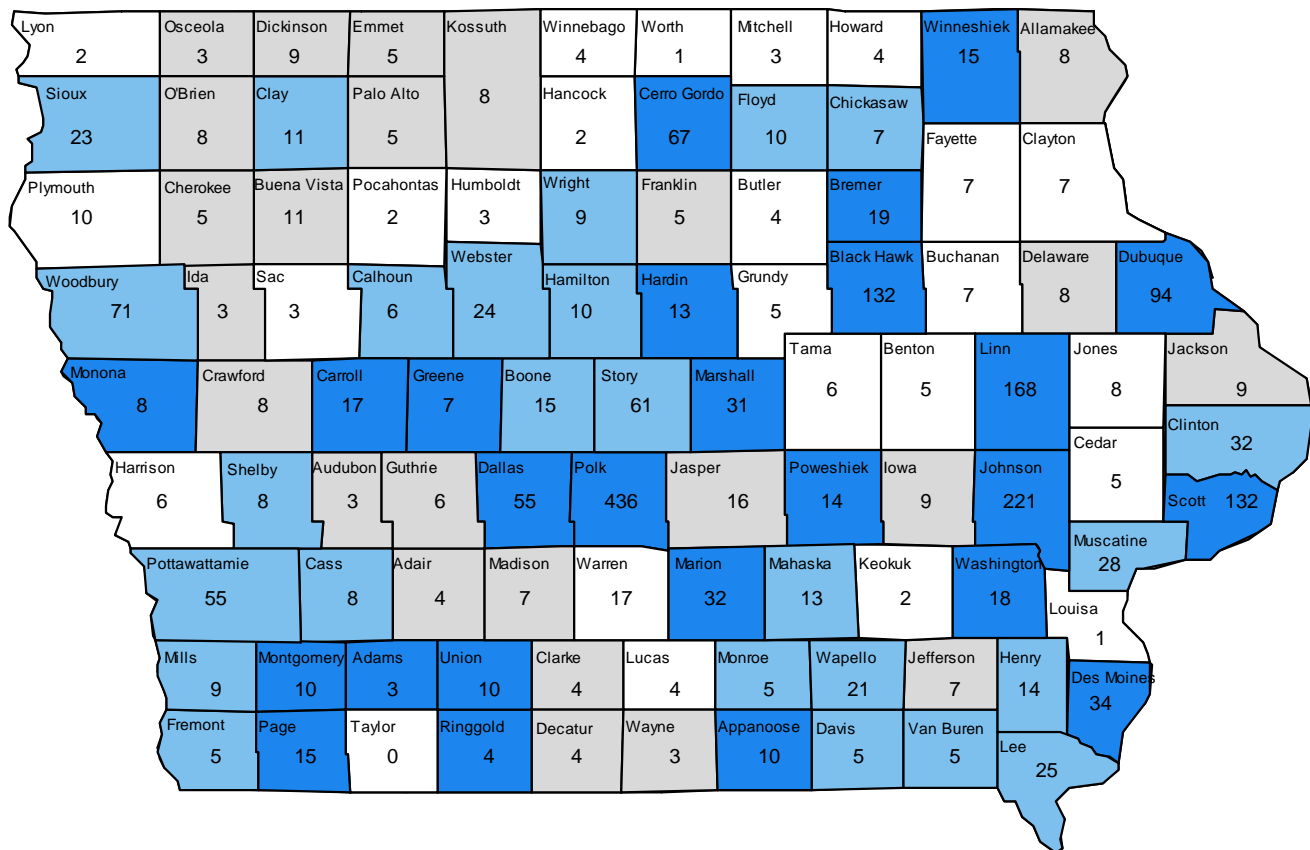


Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa



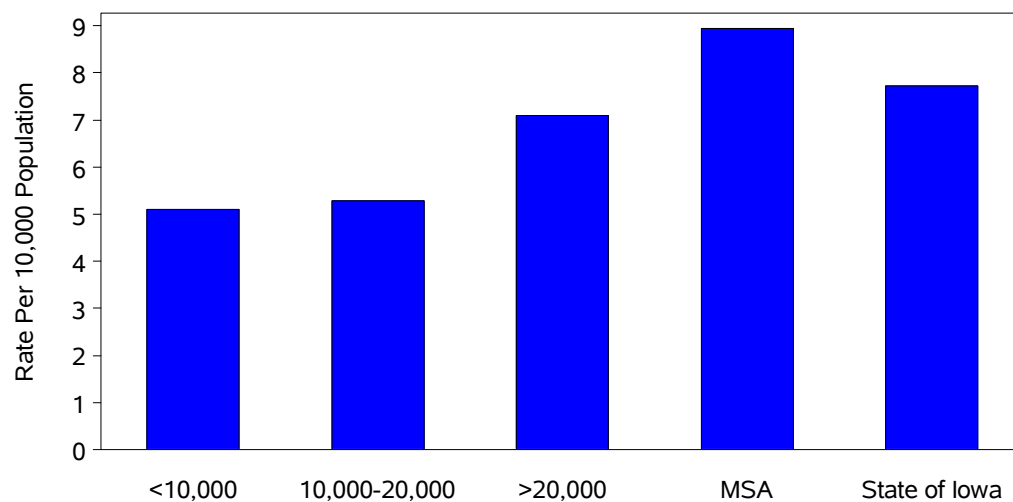
# Primary Care Physicians<sup>1</sup>

2011 Counts and Crude Rates per 10,000 (shaded)



0-4.4
  4.4-5.8
  5.8-7.2
  7-16.9

## 2011 Crude Rates by County Group

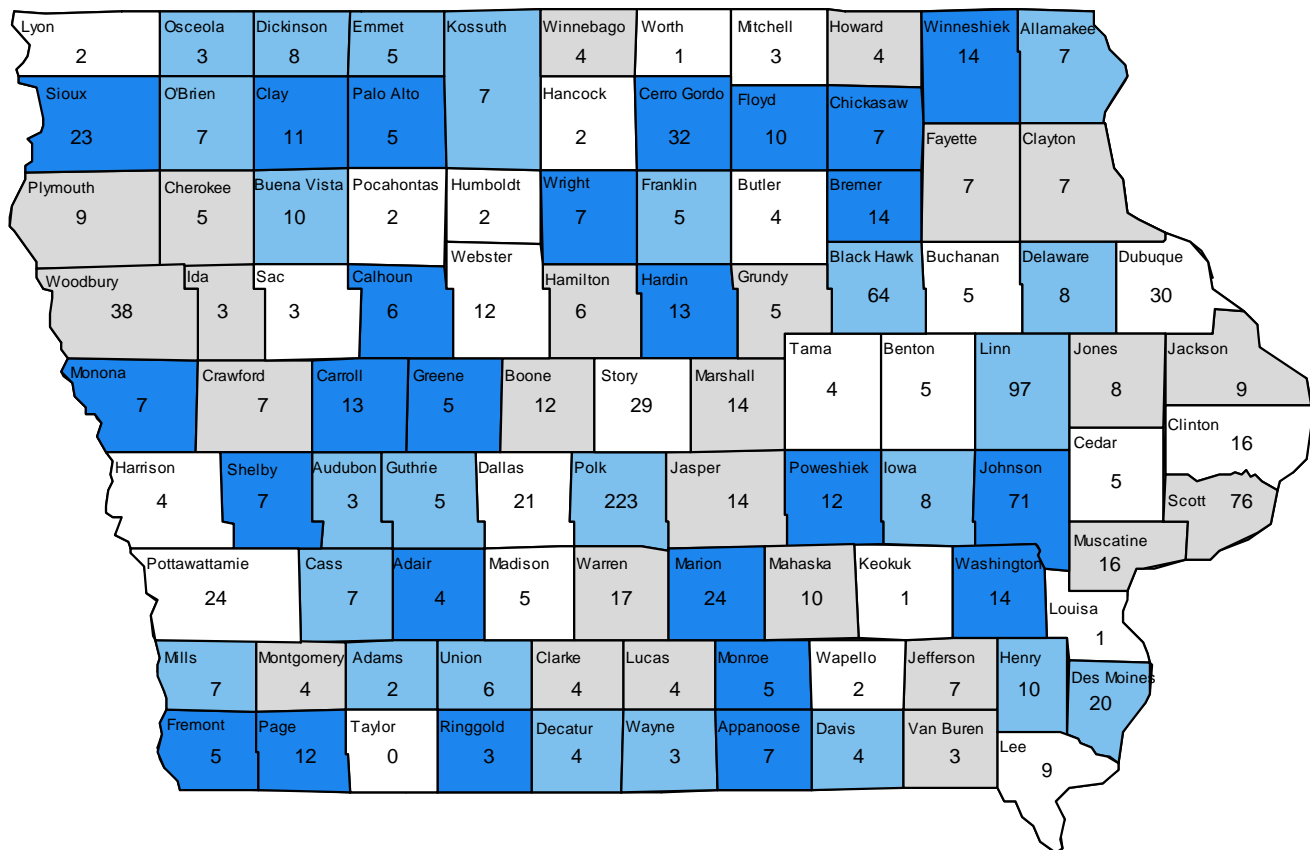


<sup>1</sup>Includes Family Practice, Internal Medicine, Pediatric, and Obstetrics/Gynecology physicians

Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

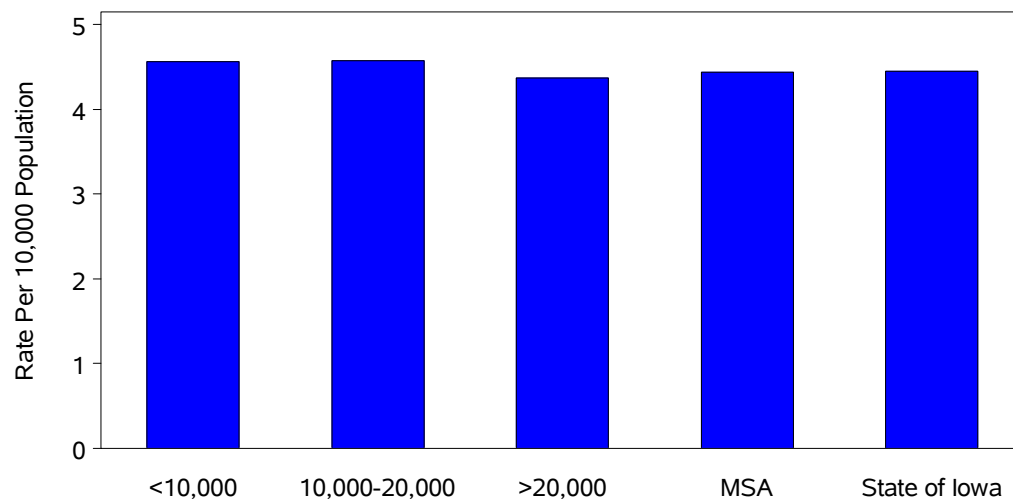
## Family Practice Physicians

2011 Counts and Crude Rates per 10,000 (shaded)



0-3.4
  3.4-4.6
  4.6-5.3
  5-7.9

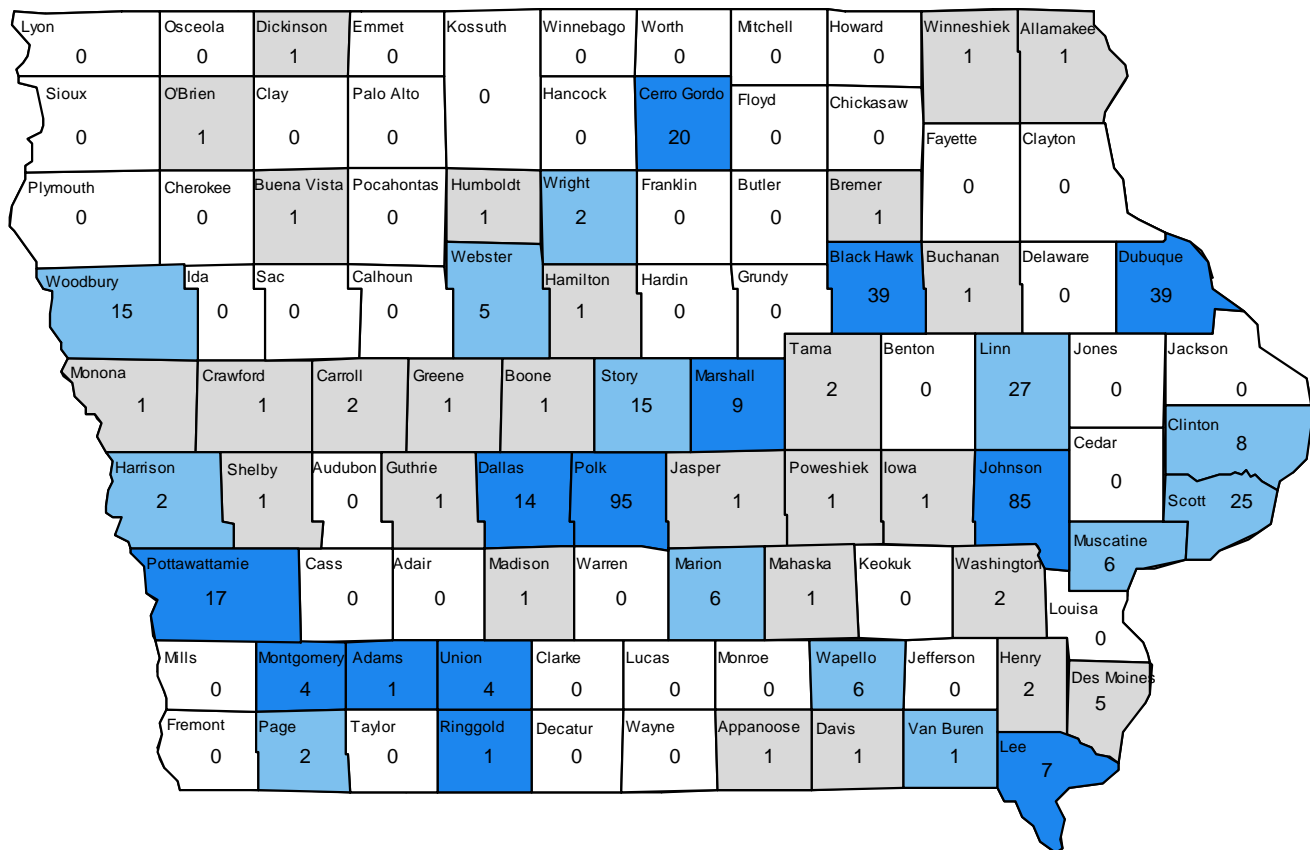
### 2011 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

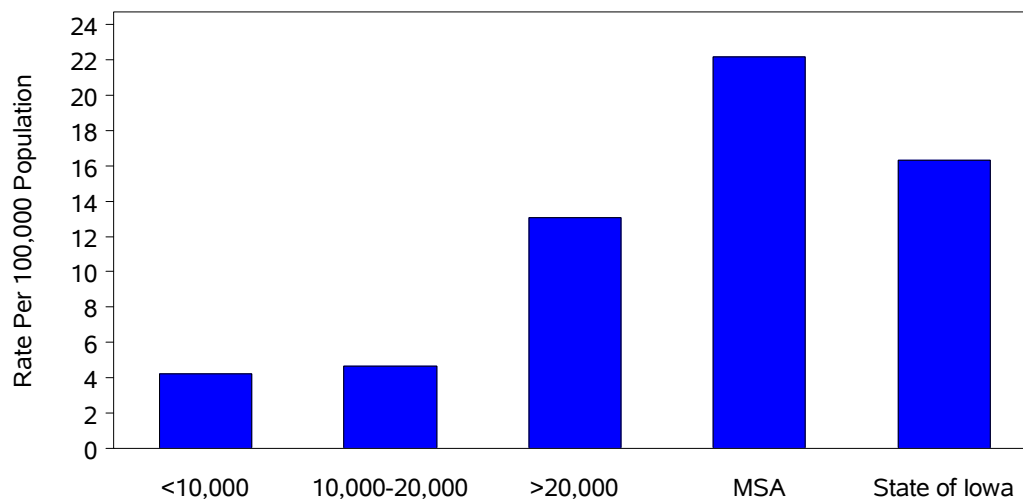
# Internal Medicine Physicians

2011 Counts and Crude Rates per 100,000 (shaded)



0      0-12.2      12.2-18.4      18.4-64.9

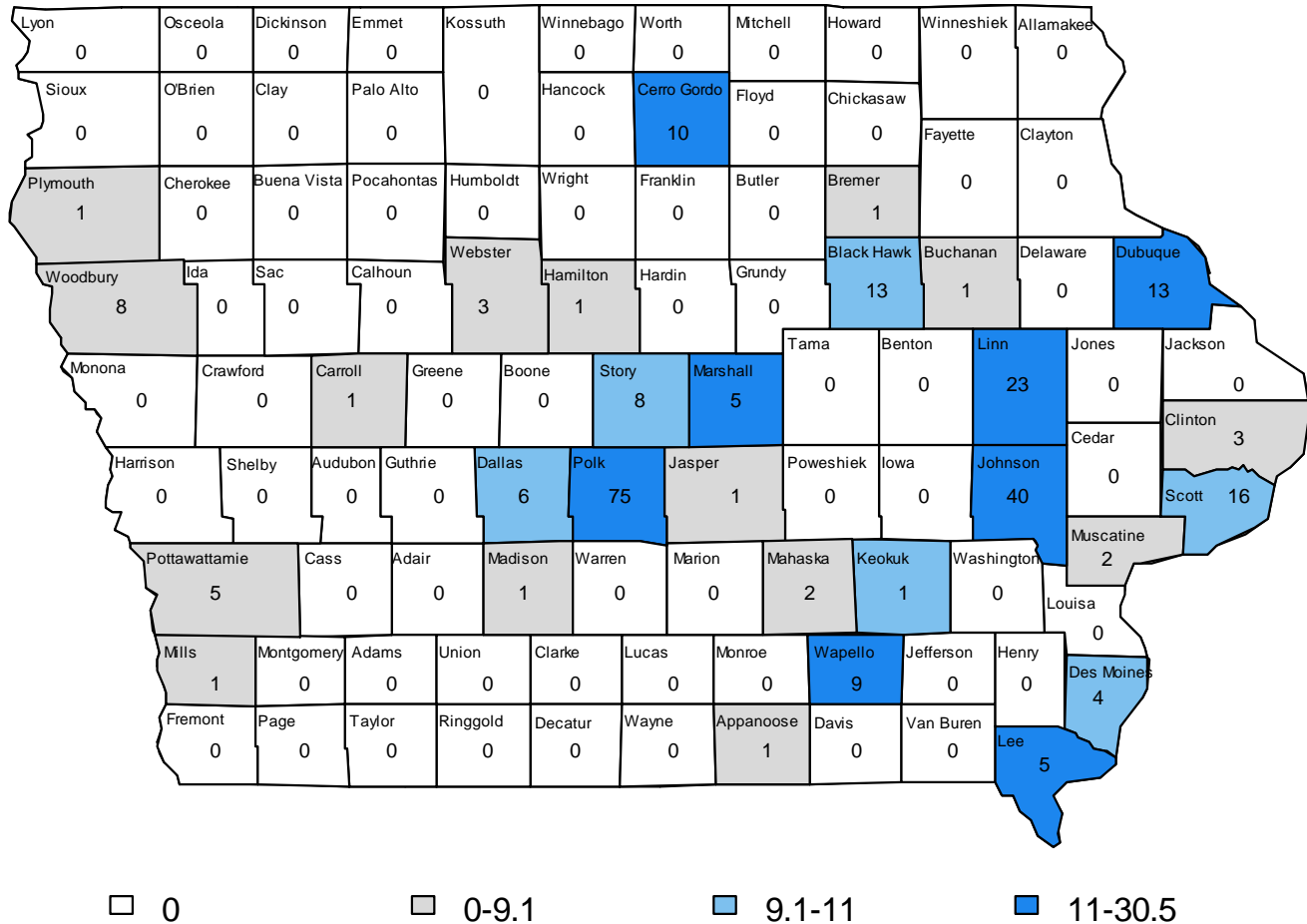
## 2011 Crude Rates by County Group



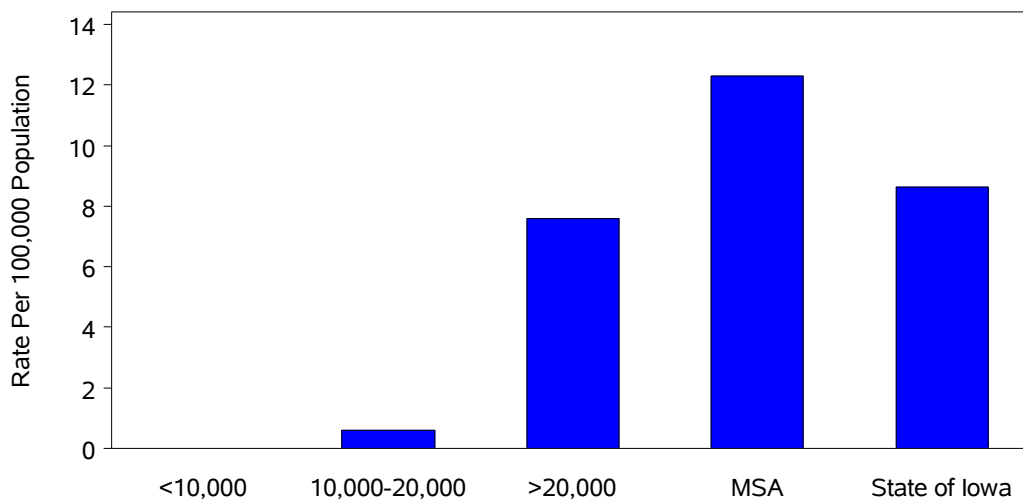
Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

## Pediatric Physicians

2011 Counts and Crude Rates per 100,000 (shaded)



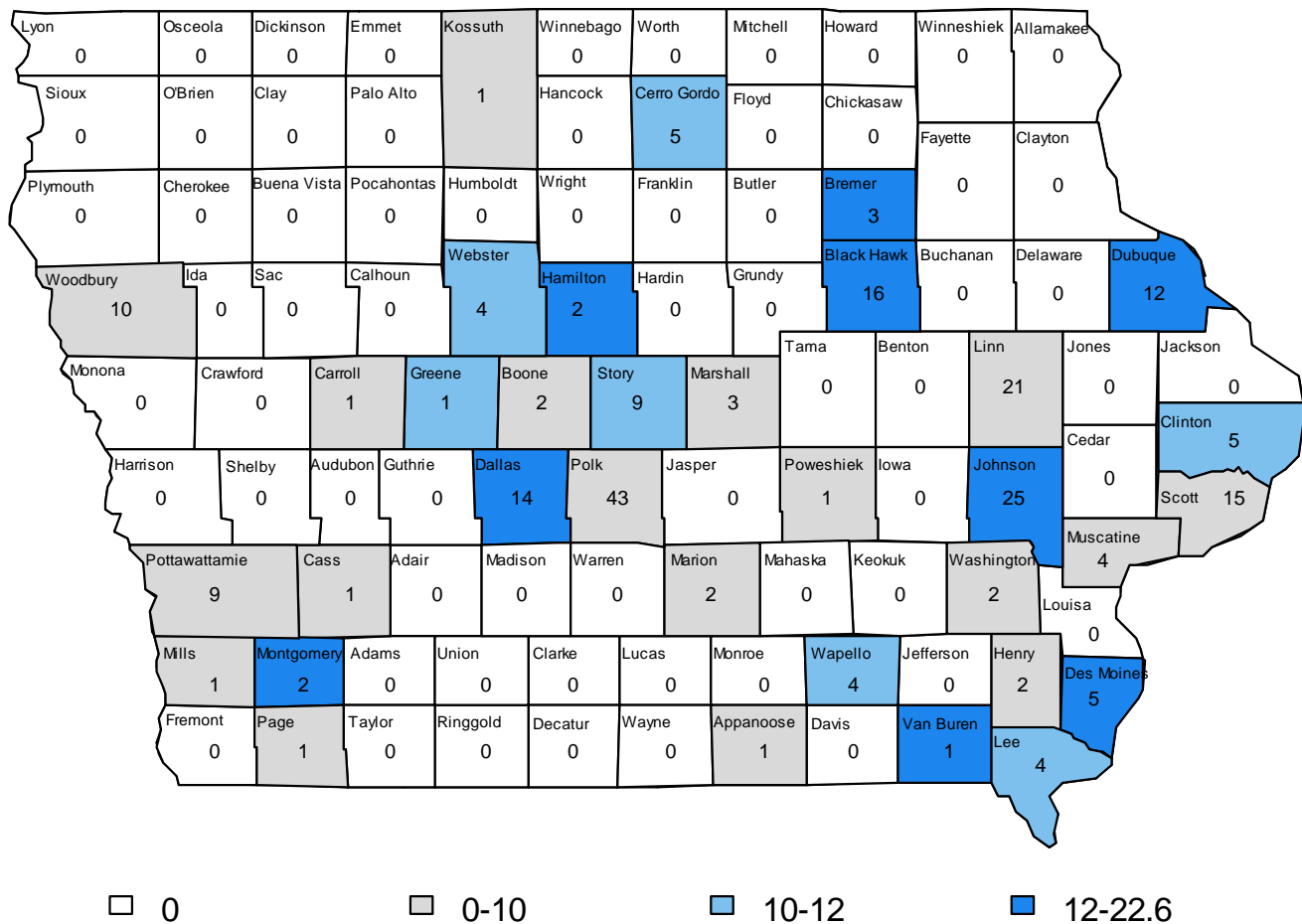
2011 Crude Rates by County Group



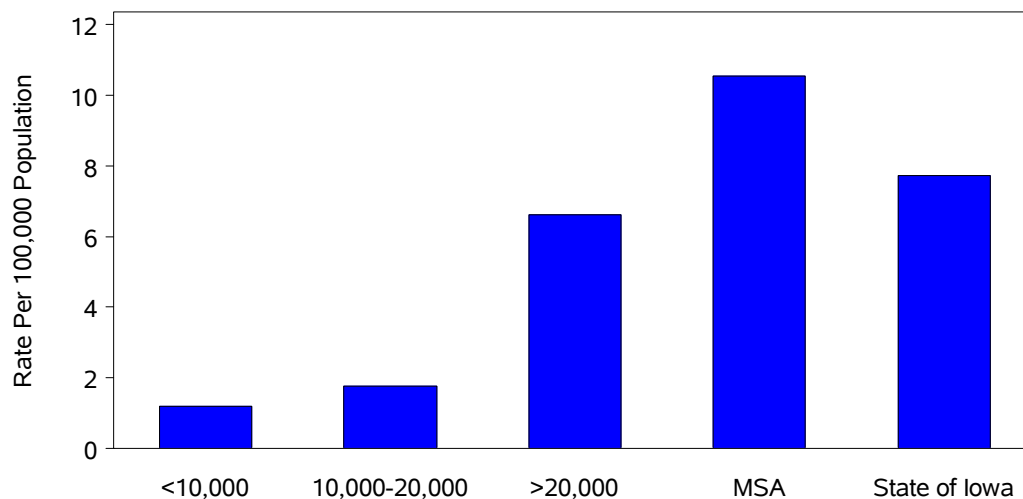
Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

# Obstetrics/Gynecology Physicians

## 2011 Counts and Crude Rates per 100,000 (shaded)



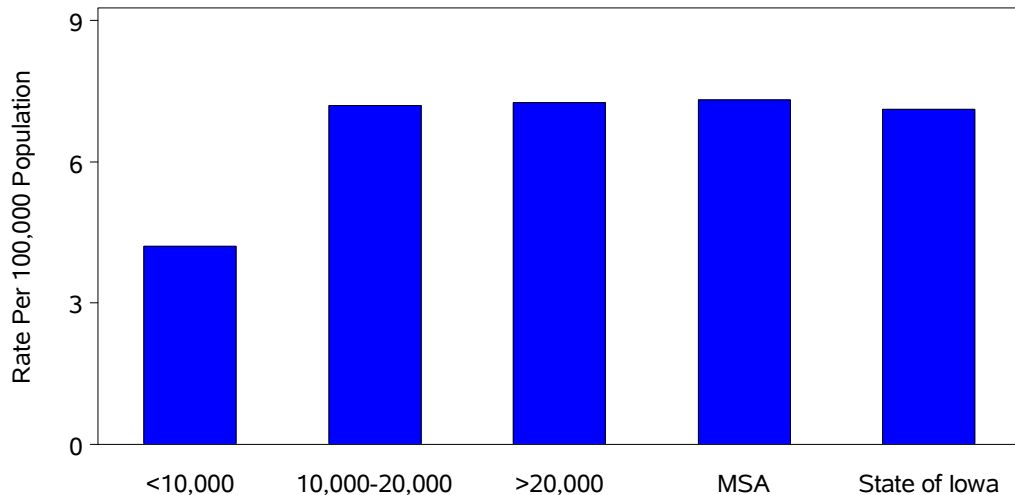
## 2011 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

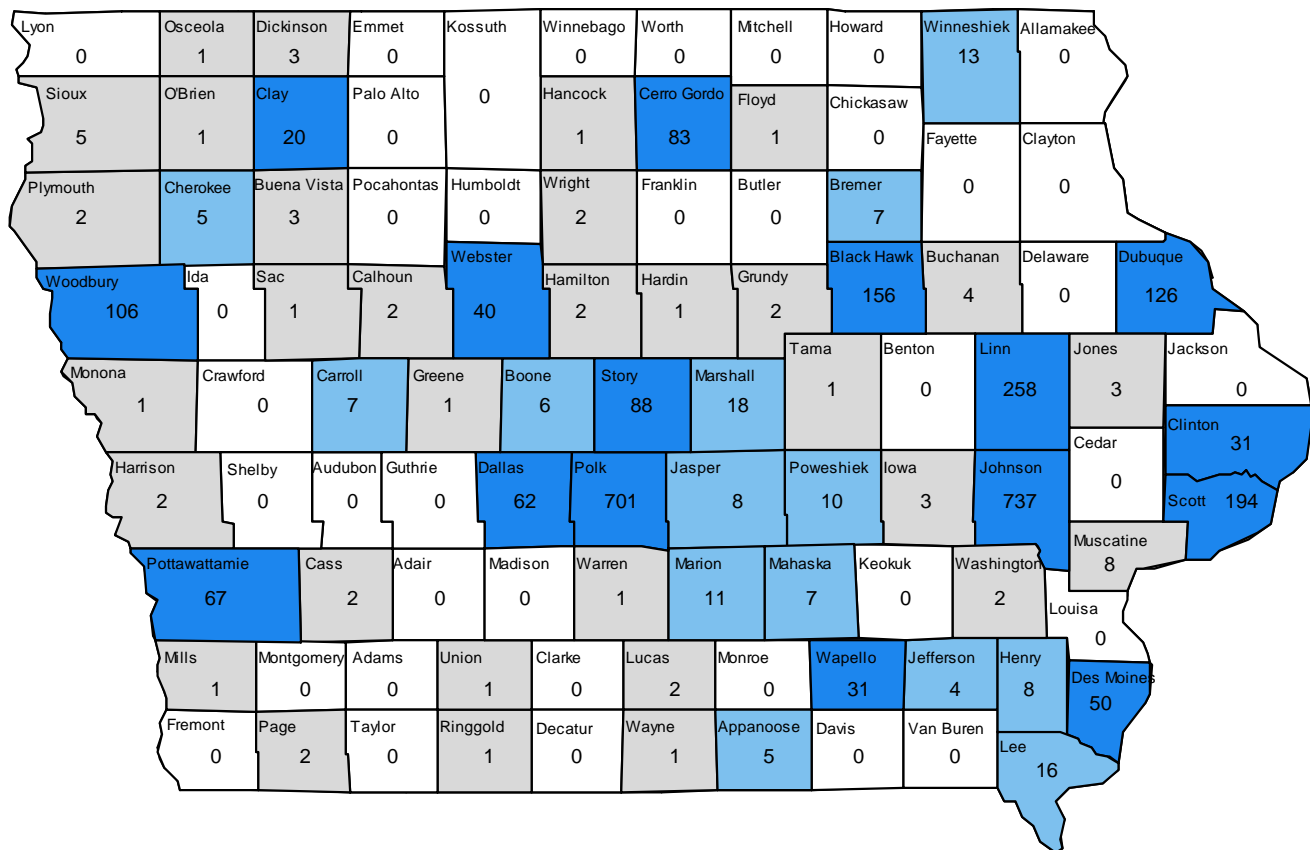
## THE 2011 IOWA HEALTH FACT BOOK

Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa



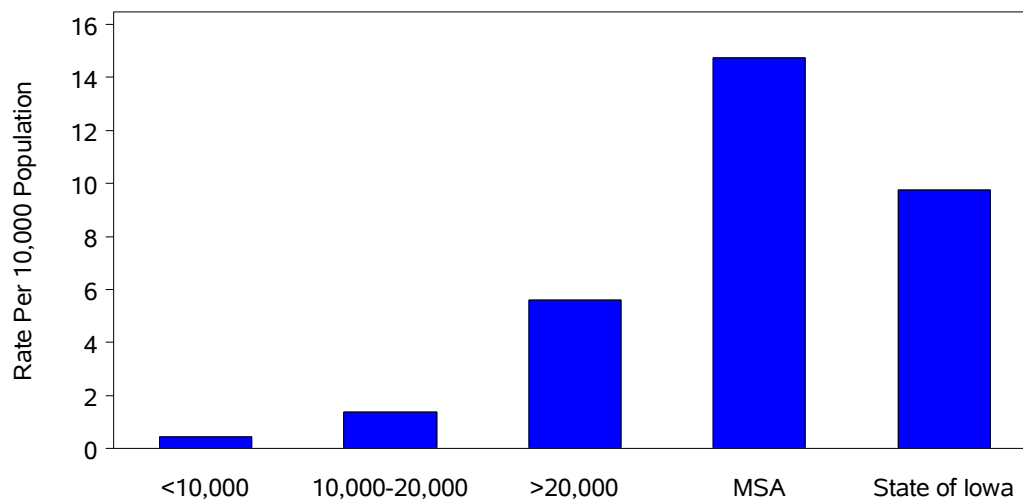
## Other Specialty Physicians

2011 Counts and Crude Rates per 10,000 (shaded)



0
  0-2.2
  2.2-6.3
  6.3-56.3

2011 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

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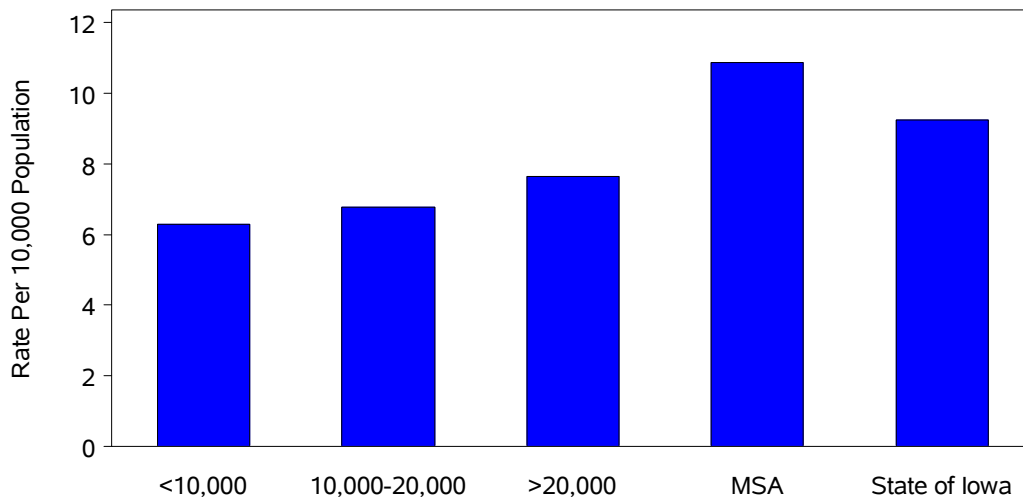


County	1	2	3
Lyons	1	0	3
Sioux	12	3	13
Plymouth	7	9	5
Woodbury	45	2	2
Monona	5	4	14
Harrison	4	5	3
Pottawattamie	30	3	3
Mills	0	3	1
Fremont	2	9	3
Osceola	0	3	1
Dickinson	3	13	5
Clay	13	5	2
Ida	2	2	2
Shelby	5	3	3
Montgomery	3	1	3
Page	9	3	2
Emmet	2	4	2
Palo Alto	4	2	2
Calhoun	2	2	2
Audubon	3	3	3
Guthrie	3	3	3
Adair	3	3	3
Union	3	3	3
Taylor	3	3	3
Ringgold	2	2	2
Clarke	2	2	2
Decatur	4	4	4
Kossuth	3	18	18
Webster	18	18	18
Hamilton	5	5	5
Boone	2	2	2
Greene	2	2	2
Boone	2	2	2
Story	21	21	21
Polk	228	228	228
Marion	14	14	14
Warren	2	2	2
Lucas	5	5	5
Wayne	5	5	5
Winnebago	2	4	4
Hancock	4	4	4
Cerro Gordo	33	33	33
Floyd	3	3	3
Butler	4	4	4
Franklin	1	1	1
Hardin	2	2	2
Grundy	1	1	1
Marshall	21	21	21
Jasper	10	10	10
Poweshiek	5	5	5
Monroe	3	3	3
Wapello	17	17	17
Jefferson	2	2	2
Appanoose	2	2	2
Davis	8	8	8
Van Buren	2	2	2
Howard	2	2	2
Chickasaw	3	3	3
Bremer	10	10	10
Black Hawk	59	59	59
Tama	5	5	5
Benton	2	2	2
Linn	74	74	74
Johnson	196	196	196
Washington	3	3	3
Henry	7	7	7
Des Moines	22	22	22
Winneshek	11	11	11
Fayette	10	10	10
Buchanan	6	6	6
Lee	11	11	11
Allamakee	5	5	5
Clayton	7	7	7
Delaware	6	6	6
Dubuque	58	58	58
Jones	0	0	0
Cedar	3	3	3
Muscatine	12	12	12
Louisia	0	0	0
Clinton	15	15	15
Scott	76	76	76
Jackson	7	7	7



## THE 2011 IOWA HEALTH FACT BOOK

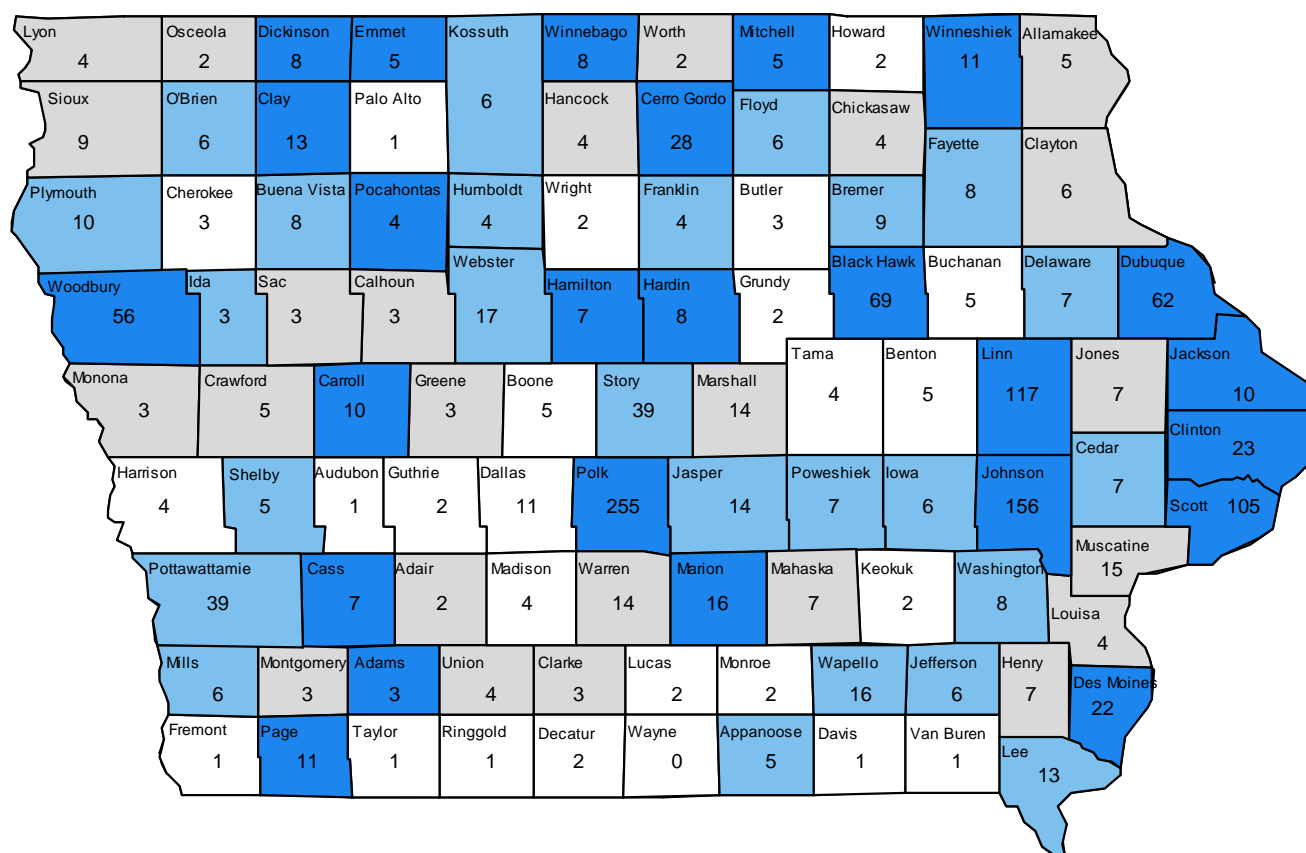
## 2011 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

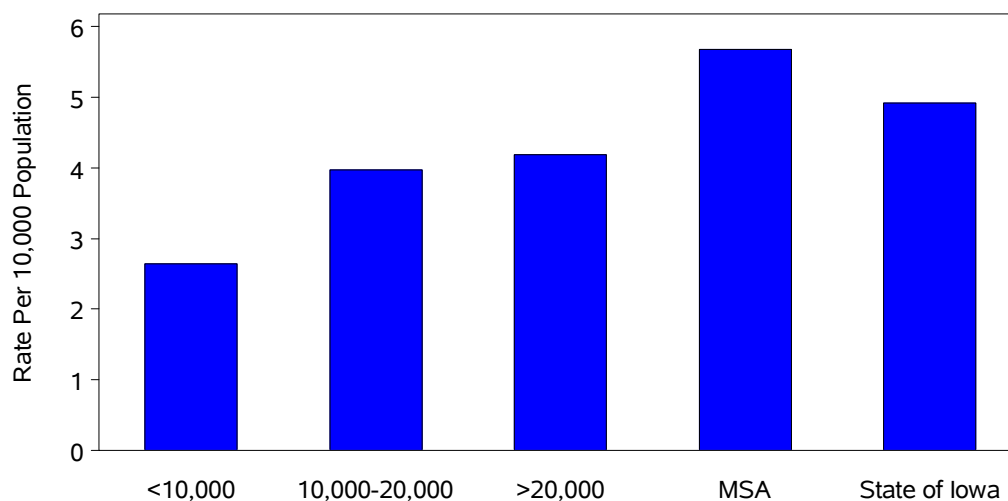
## Dentists

2011 Counts and Crude Rates per 10,000 (shaded)



0-2.7
  2.7-3.7
  3.7-4.6
  5-11.9

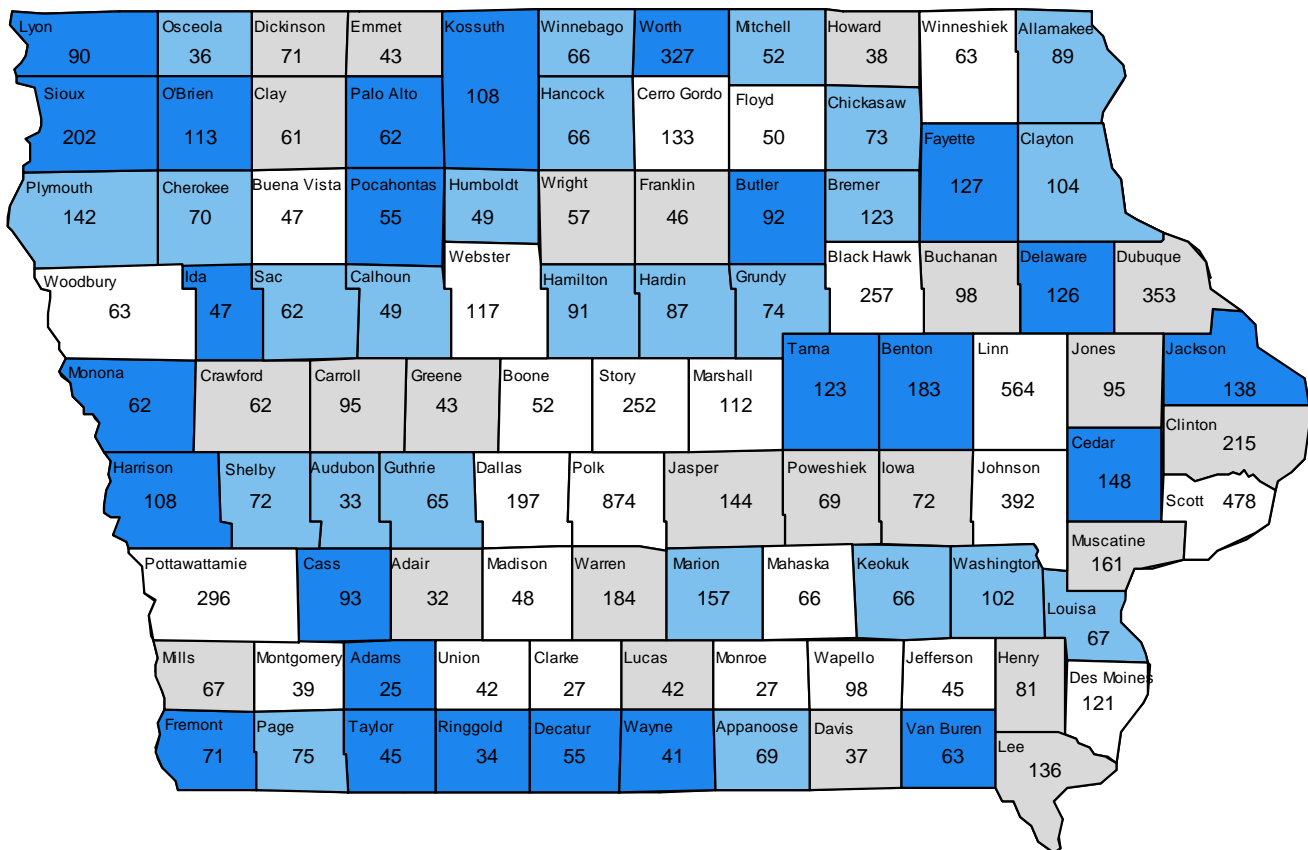
2011 Crude Rates by County Group



Source: Office of Statewide Clinical Education Programs, College of Medicine, University of Iowa

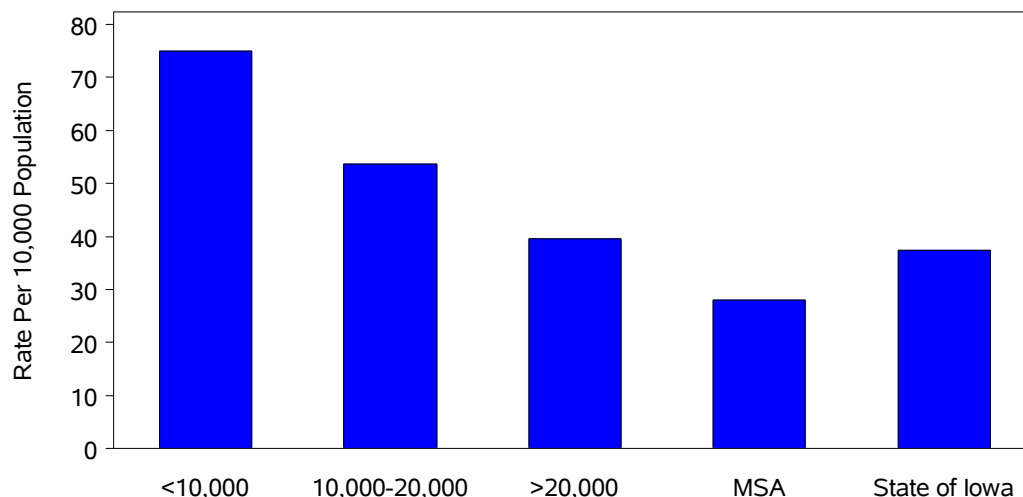
### Emergency Care Providers – Total<sup>1</sup>

2011 Counts and Crude Rates per 10,000 (shaded)



0-36.4
  36.4-48
  48-62.6
  63-433.6

## 2011 Crude Rates by County Group



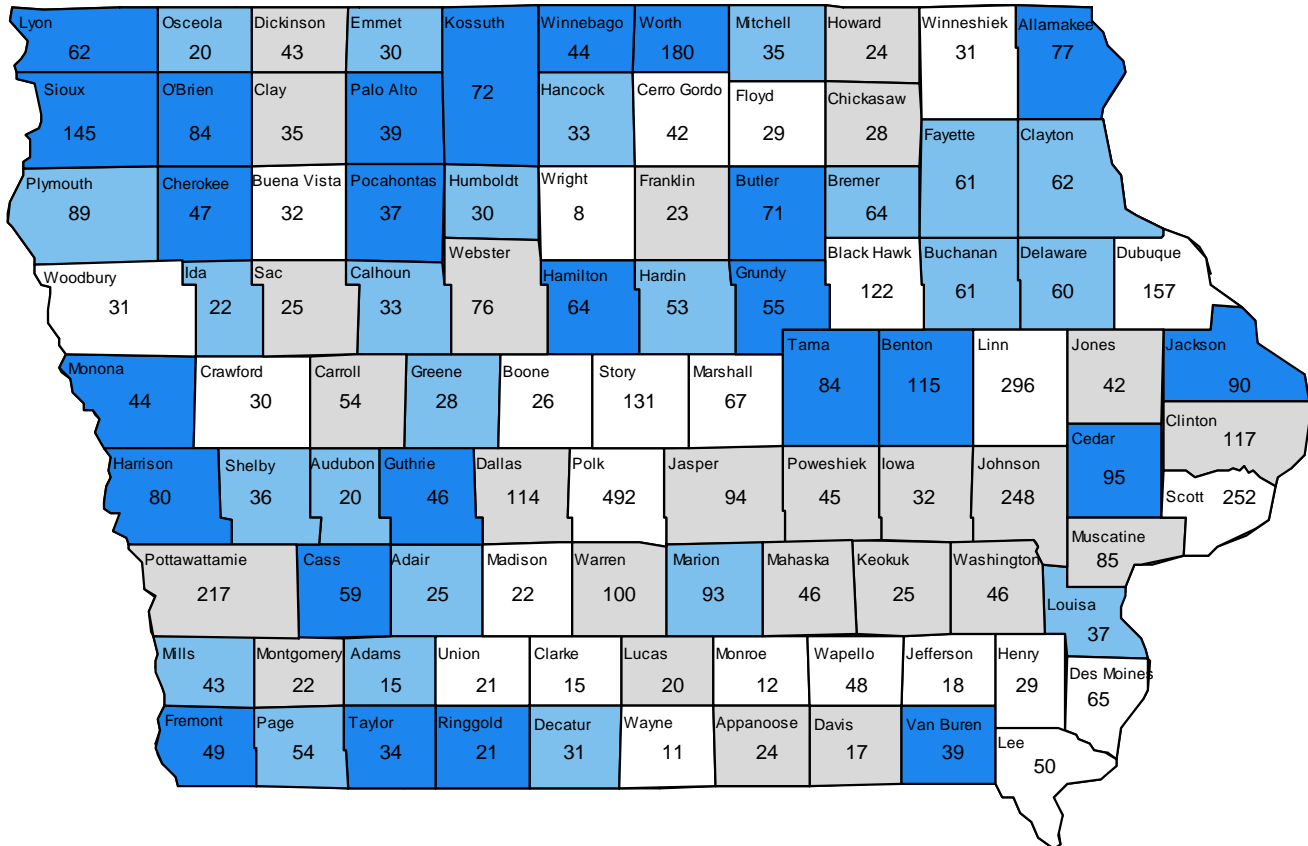
<sup>1</sup>Includes First Responder, Basic, Intermediate, Paramedic, and Paramedic Specialist

Source: Bureau of Emergency Medical Services,  
Iowa Department of Public Health

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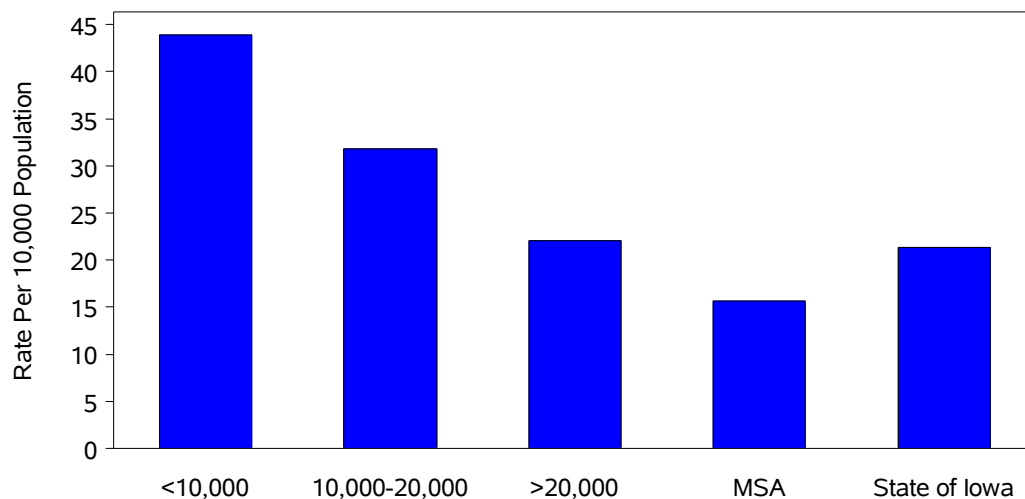
## Emergency Medical Technicians – Basic

2011 Counts and Crude Rates per 10,000 (shaded)



0-18.3
  18.3-26.1
  26.1-39.7
  40-238.7

### 2011 Crude Rates by County Group

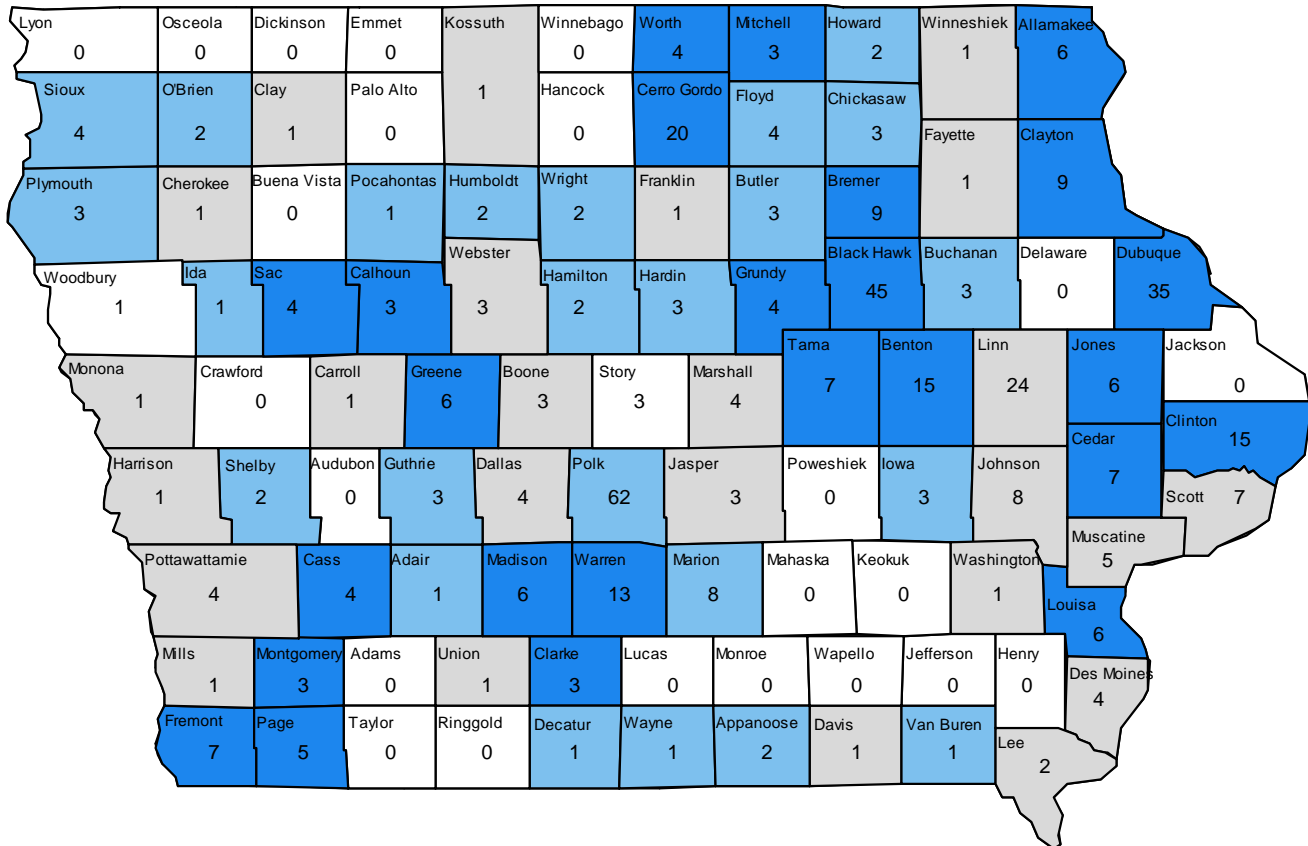


Source: Bureau of Emergency Medical Services, Iowa Department of Public Health

[illegible]

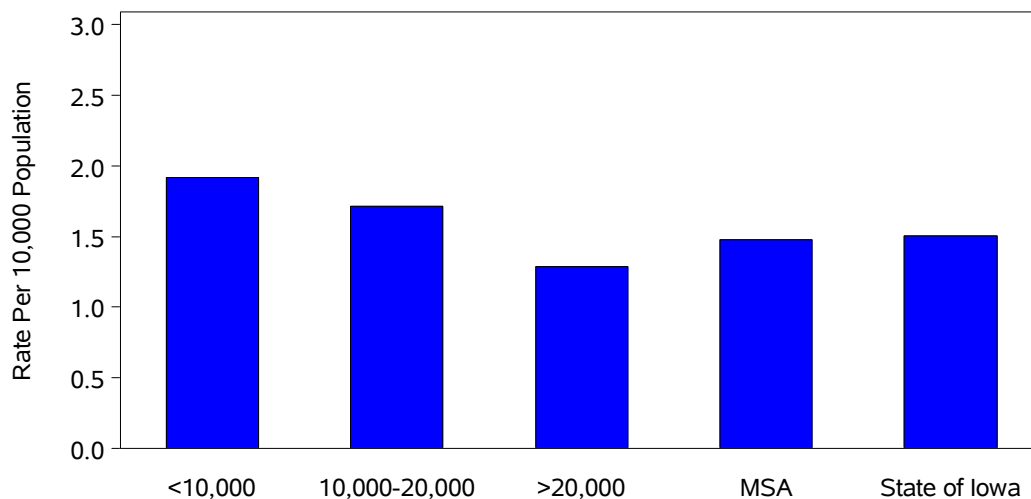
## Emergency Medical Technicians – Paramedics

2011 Counts and Crude Rates per 10,000 (shaded)



0-0.4
  0.4-1.2
  1.2-2.8
  3-9.5

2011 Crude Rates by County Group



Source: Bureau of Emergency Medical Services, Iowa Department of Public Health



County	Obama	Clinton	McCain
Lyon	0	2	17
Osceola	2	17	3
Dickinson	3	17	5
Emmet	5	17	8
Kossuth	8	49	3
Winnebago	3	1	14
Worth	1	14	1
Mitchell	1	14	1
Howard	1	14	1
Winneshek	1	14	1
Allamakee	1	14	1
Sioux	8	4	7
O'Brien	4	7	5
Clay	7	5	11
Palo Alto	5	11	19
Hancock	11	19	6
Cerro Gordo	19	6	5
Floyd	6	5	15
Chickasaw	5	15	7
Fayette	15	7	8
Clayton	7	8	95
Plymouth	8	7	14
Cherokee	7	14	6
Buena Vista	7	6	5
Pocahontas	0	5	37
Humboldt	4	3	7
Wright	3	7	17
Franklin	6	17	7
Butler	5	17	8
Bremer	17	8	95
Black Hawk	37	8	95
Buchanan	7	8	95
Delaware	8	95	95
Dubuque	95	95	95
Webster	18	14	6
Hamilton	14	6	3
Hardin	6	3	8
Grundy	3	8	95
Woodbury	14	2	5
Ida	2	5	2
Sac	5	2	18
Calhoun	2	18	14
Monona	6	8	13
Crawford	8	13	2
Carroll	13	2	14
Greene	2	14	52
Boone	14	52	13
Story	52	13	8
Marshall	13	8	12
Tama	8	12	126
Benton	12	126	25
Linn	126	25	15
Jones	25	15	45
Jackson	15	45	123
Clinton	45	123	44
Cedar	20	44	13
Scott	123	44	13
Muscatine	44	13	42
Louis	13	42	24
Des Moines	42	24	24
Henry	18	24	24
Jefferson	3	24	24
Wapello	28	24	24
Monroe	10	24	24
Lucas	12	24	24
Clarke	3	24	24
Union	12	24	24
Adams	5	24	24
Montgomery	7	24	24
Mills	11	24	24
Fremont	3	24	24
Page	9	24	24
Taylor	5	24	24
Ringgold	3	24	24
Decatur	5	24	24
Wayne	5	24	24
Appanoose	12	24	24
Davis	5	24	24
Van Buren	10	24	24
Lee	24	24	24
Washington	20	24	24
Keokuk	16	24	24
Mahaska	11	24	24
Marion	19	24	24
Warren	44	24	24
Madison	16	24	24
Adair	2	24	24
Cass	4	24	24
Pottawattamie	50	24	24
Harrison	4	24	24
Shelby	14	24	24
Audubon	5	24	24
Guthrie	5	24	24
Dallas	46	24	24
Polk	252	24	24
Jasper	33	24	24
Poweshiek	7	24	24
Iowa	12	24	24
Johnson	88	24	24
Clinton	45	24	24
Scott	123	24	24
Muscatine	44	24	24
Louis	13	24	24
Des Moines	42	24	24
Henry	18		





## Health Care Facilities

The information presented on health care facilities comes from the Health Facilities Division of the Iowa Department of Inspections and Appeals (DIA). The Department is responsible for inspecting all Chapter 135C licensed health care facilities in Iowa, including those presented in the 2011 Iowa Health Fact Book. Under state law, DIA is responsible for inspecting and licensing or certifying Hospitals (135B), Psychiatric Medical Institutions for Children (135H), Hospice Programs (135J), Elder Group Homes (231B), and Assisted Living Programs (231C). The Department also conducts inspections of numerous Medicare and Medicaid-certified entities (skilled nursing facilities, home health agencies, hospitals, hospices, end-stage renal disease units, ambulatory surgical centers, etc.) under a contract with the federal Centers for Medicare & Medicaid Services (CMS), and investigates complaints of substandard care or services in these entities. Additional information about licensed or certified health care providers and suppliers may be accessed through the Health Facilities Division's web site, [https://dia-hfd.iowa.gov/DIA\\_HFD/Home.do](https://dia-hfd.iowa.gov/DIA_HFD/Home.do). There are only two Intermediate Care Facilities for Persons with Mental Illness in Iowa (a 25-bed facility in Davis County and a 57-bed facility in Lee County), so statewide data for this type of entity are not presented.

### FACILITY TYPES REGULATED BY THE STATE OF IOWA DIVISION OF HEALTH FACILITIES...

Ambulatory Surgical Centers  
 Birthing Centers  
 Chronic Confusion or Dementing Illness Units  
 Community Mental Health Centers  
 Comprehensive Out-Patient Rehabilitation Facilities  
 Critical Access Hospitals  
 End-Stage Renal Disease Facilities  
 Home Health Agencies  
 Hospices  
 Hospital Based (Distinct-Part) Nursing Facility Units (Covered by Medicaid)  
 Hospital Based (Distinct-Part) Skilled Nursing Facility Units (Covered by Medicaid)  
 Hospital Based (Distinct-Part) Skilled Nursing Facility/Nursing Facility Units (Covered by Medicaid)  
 Hospital Based Intermediate Care Facilities for the Mentally Retarded (Covered by Medicaid)  
 Hospitals  
 Hospitals with Psychiatric Units excluded under the Medicare Prospective Payment System  
 Hospitals with Swing-Beds  
 Intermediate Care Facilities for Persons with Mental Illness  
 Intermediate Care Facilities for the Mentally Retarded  
 Laboratories Covered under the (Federal) Clinical Laboratories Improvement Amendments 1988 (CLIA '88)  
 Nursing Facilities  
 Organ Procurement Organizations  
 Portable X-Ray Service Suppliers  
 Psychiatric Medical Institutions for Children  
 Rehabilitation Agencies with Out-Patient Physical Therapy/Out-Patient speech Pathology/Out-Patient Occupational Therapy Providers  
 Residential Care Facilities  
 Residential Care Facilities for Persons with Mental Illness  
 Residential Care Facilities for the Mentally Retarded  
 Rural Health Clinics  
 Specialized 3-5 Bed Facilities

## **Community and Migrant Health Centers**

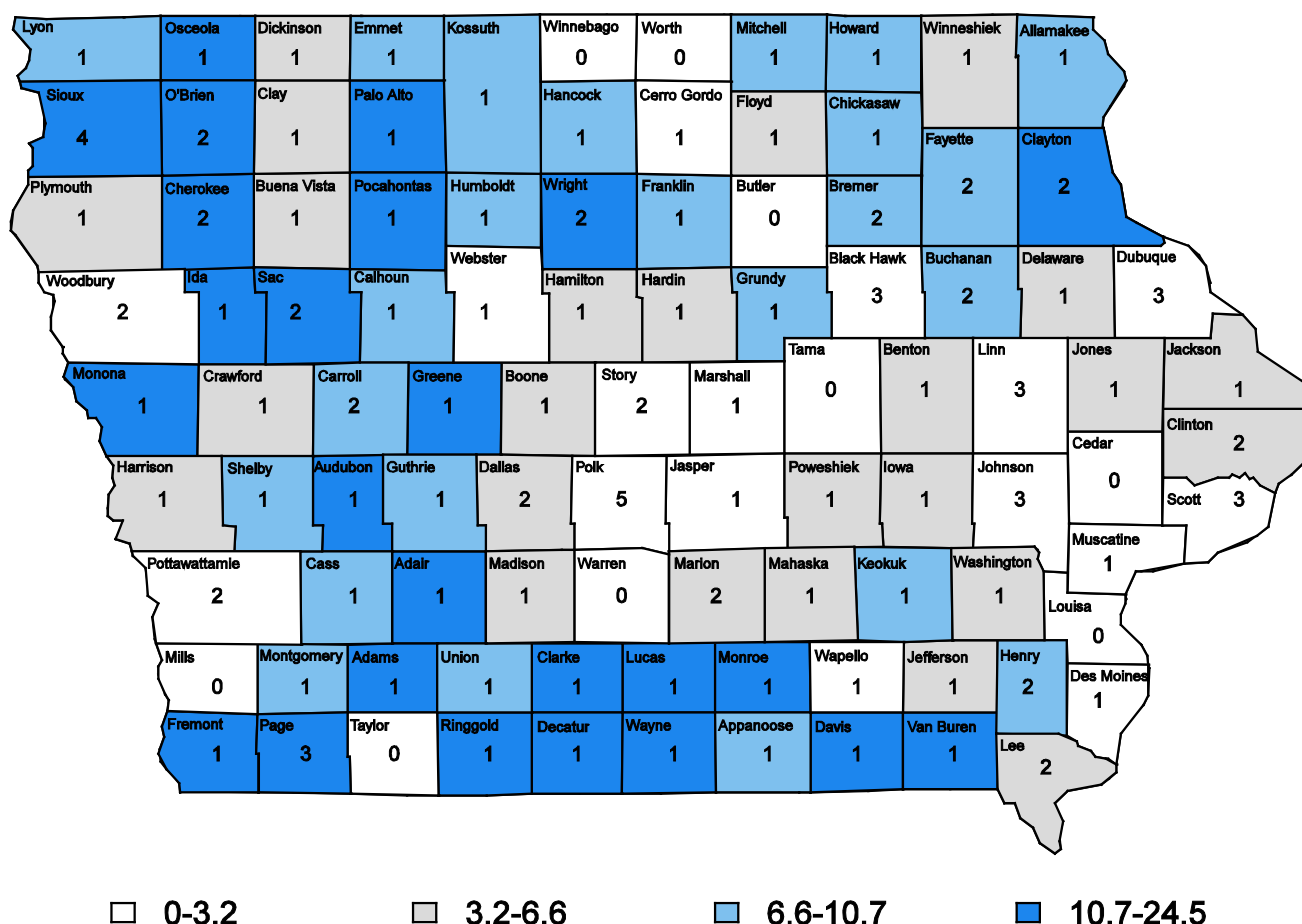
Community and migrant health centers provide affordable, accessible, and acceptable primary health care to Iowans. These centers primarily serve indigent, medically-underserved, and under-insured populations and assist special populations through grants and programs. Community and migrant health centers are safety net providers. They provide several health services to the community, including comprehensive health services with a variety of physician specialties, general dentistry and community health programs involving oral health education and dental screening, prenatal care, family planning, health screenings, immunizations, case management, and pharmacies. Centers may be affiliated with a regional health system that can provide access to substantial support systems. Community Health Centers (CHCs) are funded by Section 330 funds of the Public Health Service Act. Iowa has 12 such centers with a broad network of satellite centers. Under a state incubator program, another center services patients. CHCs are required to provide primary health services, dental services, mental health services, prevention, education, and case management. Patients cannot be turned away on the basis of ability to pay. A sliding fee scale based on income is mandated. The C/MHC model is a non-profit corporation whose board members must be members of the community and at least one percent of the board must be patients of the health center. Further information on Community Health Centers can be obtained from the Iowa/Nebraska Primary Care Association (IA/NEPCA) at the web site [www.ianepca.com](http://www.ianepca.com).

## **Certified Rural Health Clinics**

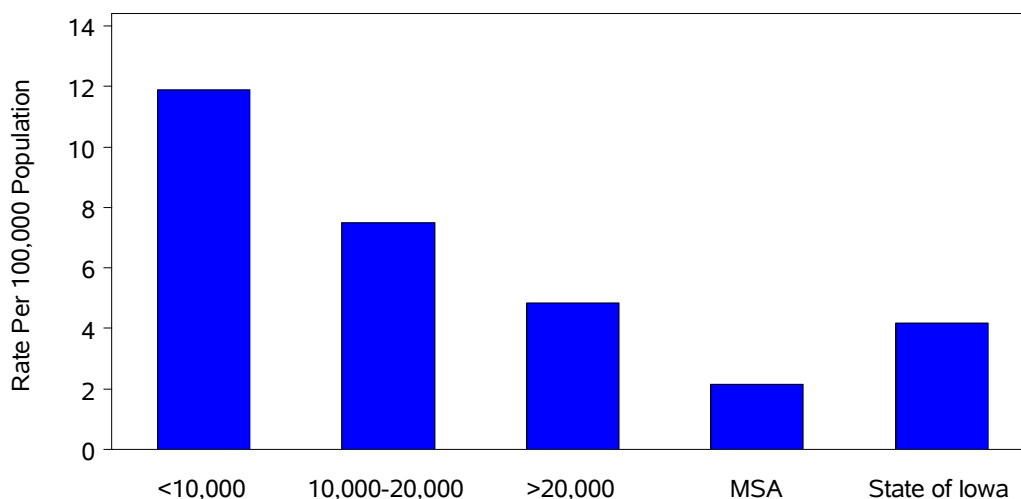
A rural health clinic is a clinic located in a rural area designated as a shortage area for personal health service and/or primary medical care manpower. In 2011, there were 138 certified rural health clinics in small communities (Iowa Department of Inspections and Appeals), located in 57 of Iowa's 99 counties. Such a clinic is neither a rehabilitation agency nor a facility primarily for the care and treatment of mental diseases. Patient services are furnished by a physician's assistant or nurse practitioner at least 50 percent of the time the clinic operates. The definition of such is found in Title 42 in the Code of Federal Regulations. Rural Health Clinics receive enhanced reimbursement for Medicare.

# Hospitals

## 2011 Counts and Crude Rates per 100,000 (shaded)



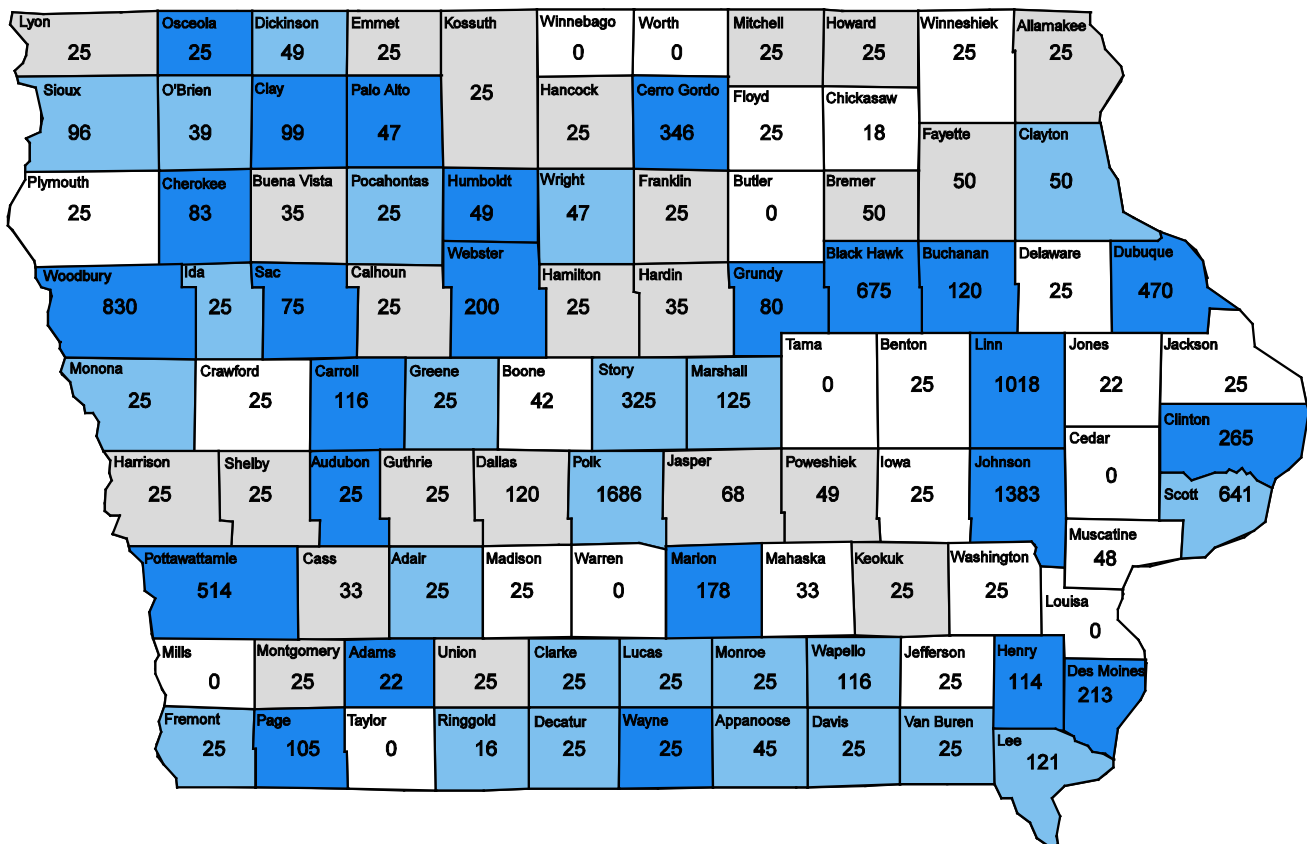
## 2011 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

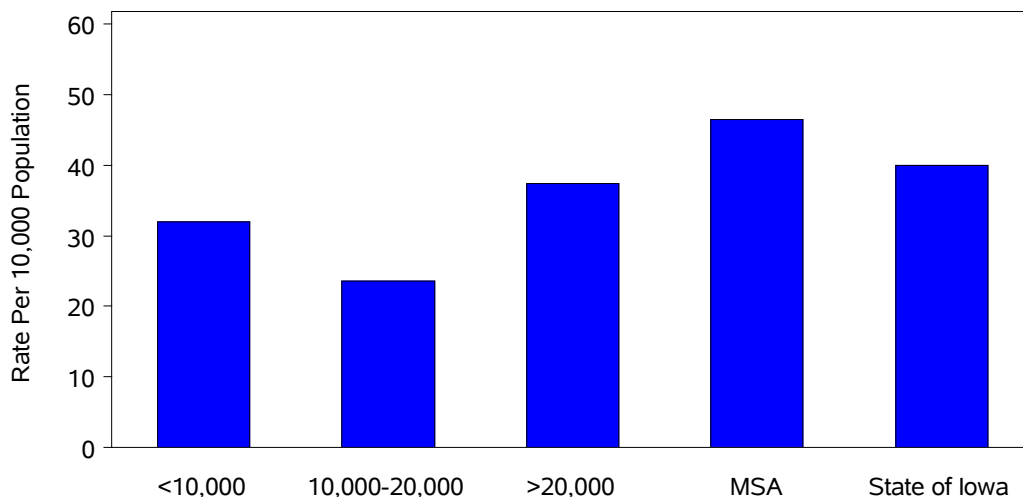
## Hospital Beds

2011 Counts and Crude Rates per 100,000 (shaded)



0-16.3
  16.3-27
  27-39.3
  39.3-105.6

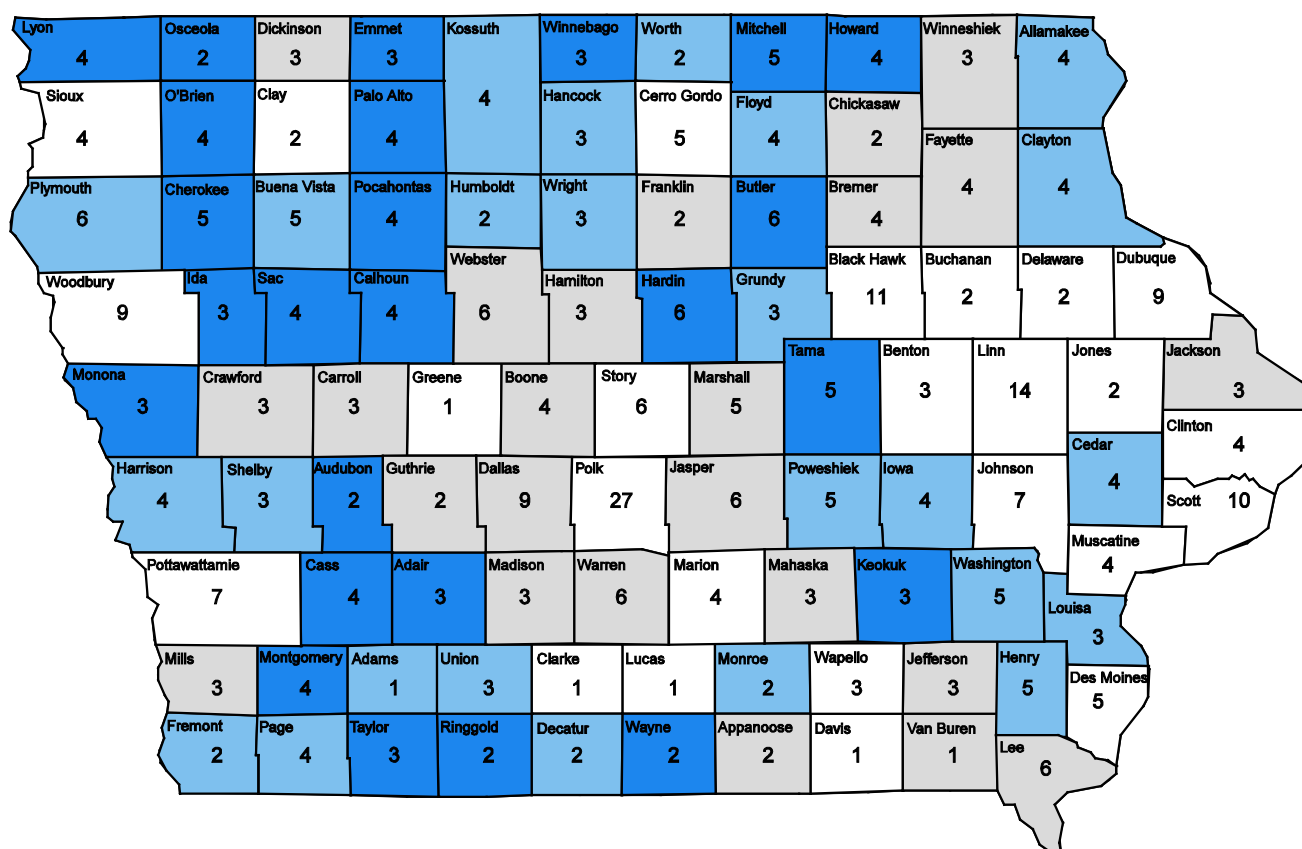
2011 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

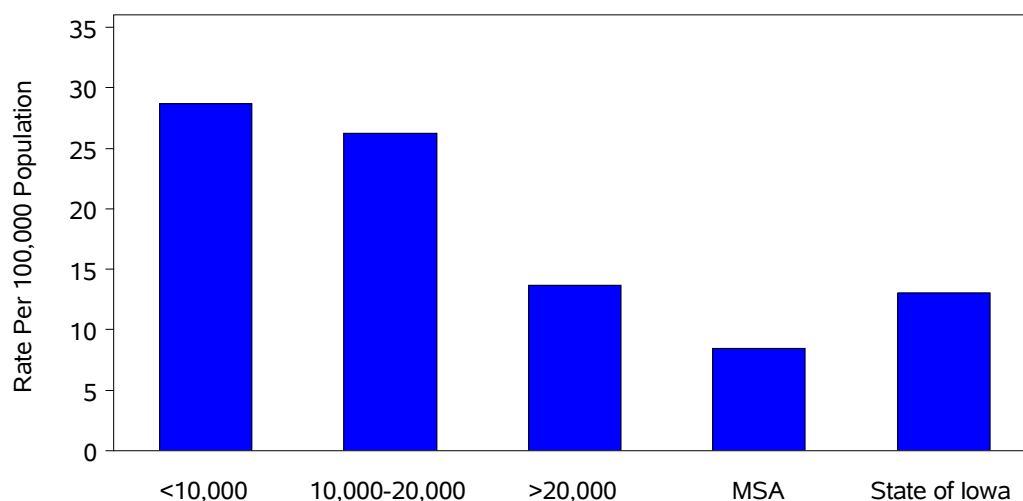
## Nursing Facilities

2011 Counts and Crude Rates per 100,000 (shaded)



□ 0-12.6      □ 12.6-21.1      □ 21.1-28      ■ 28-54.5

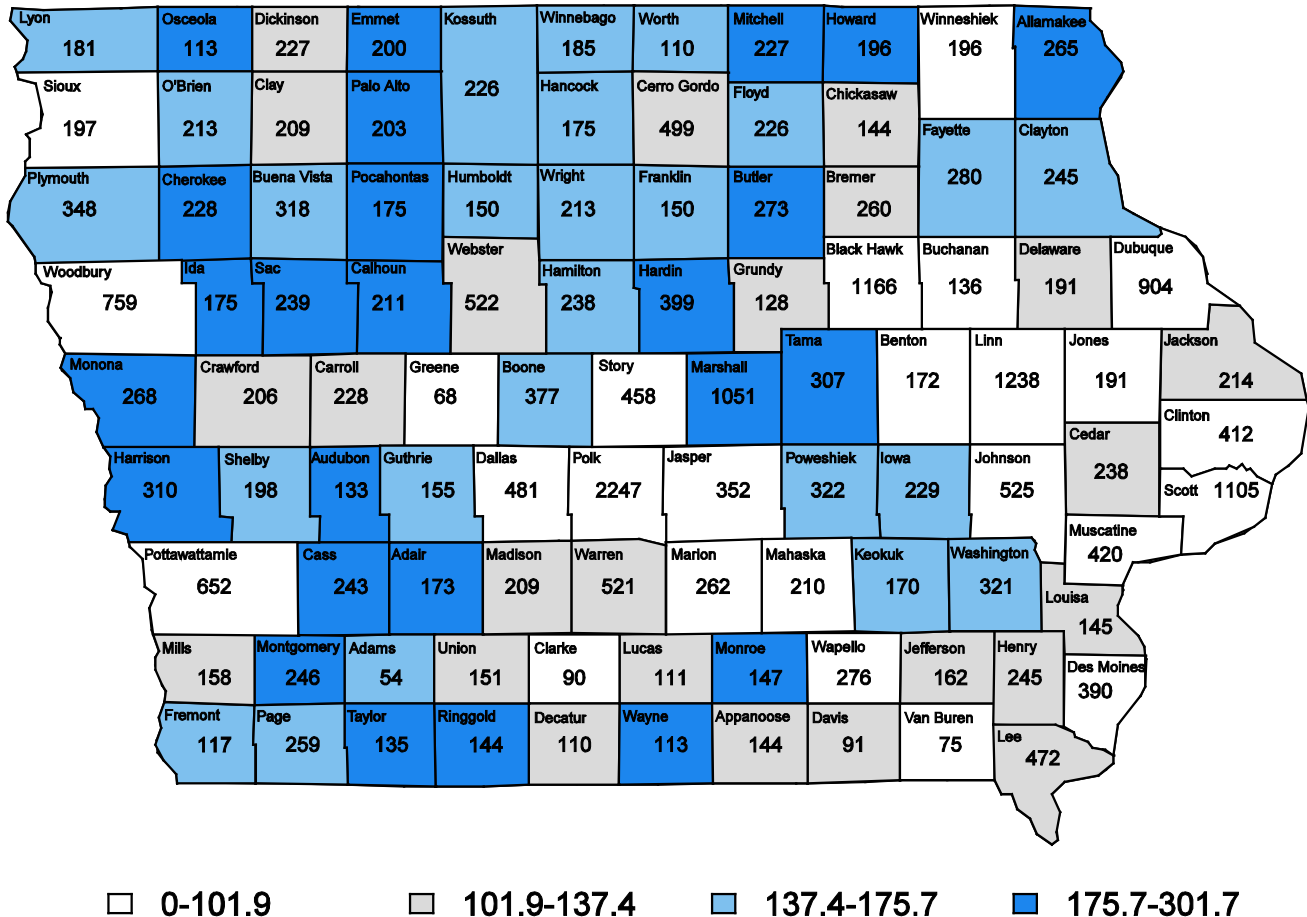
2011 Crude Rates by County Group



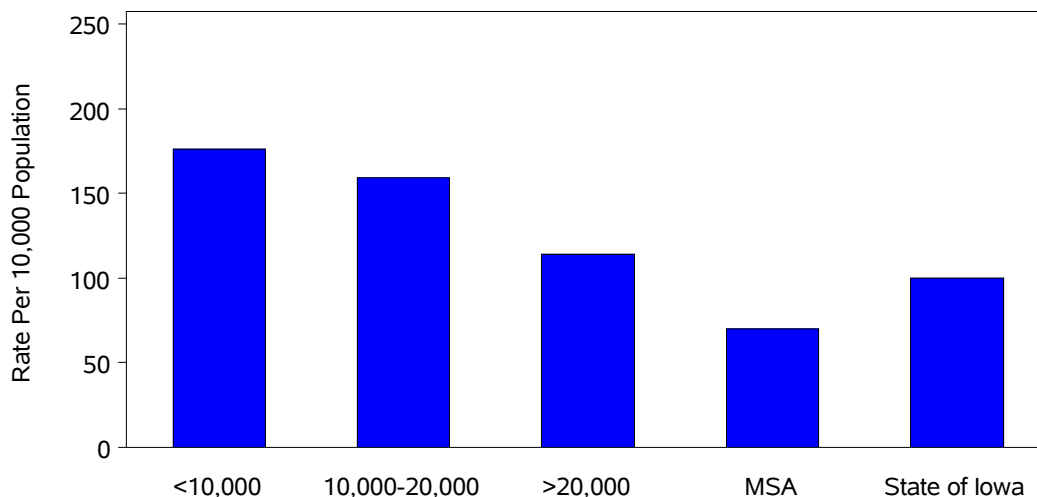
Source: Department of Inspections and Appeals, Iowa Department of Public Health

## THE 2011 IOWA HEALTH FACT BOOK

Source: Department of Inspections and Appeals, Iowa Department of Public Health



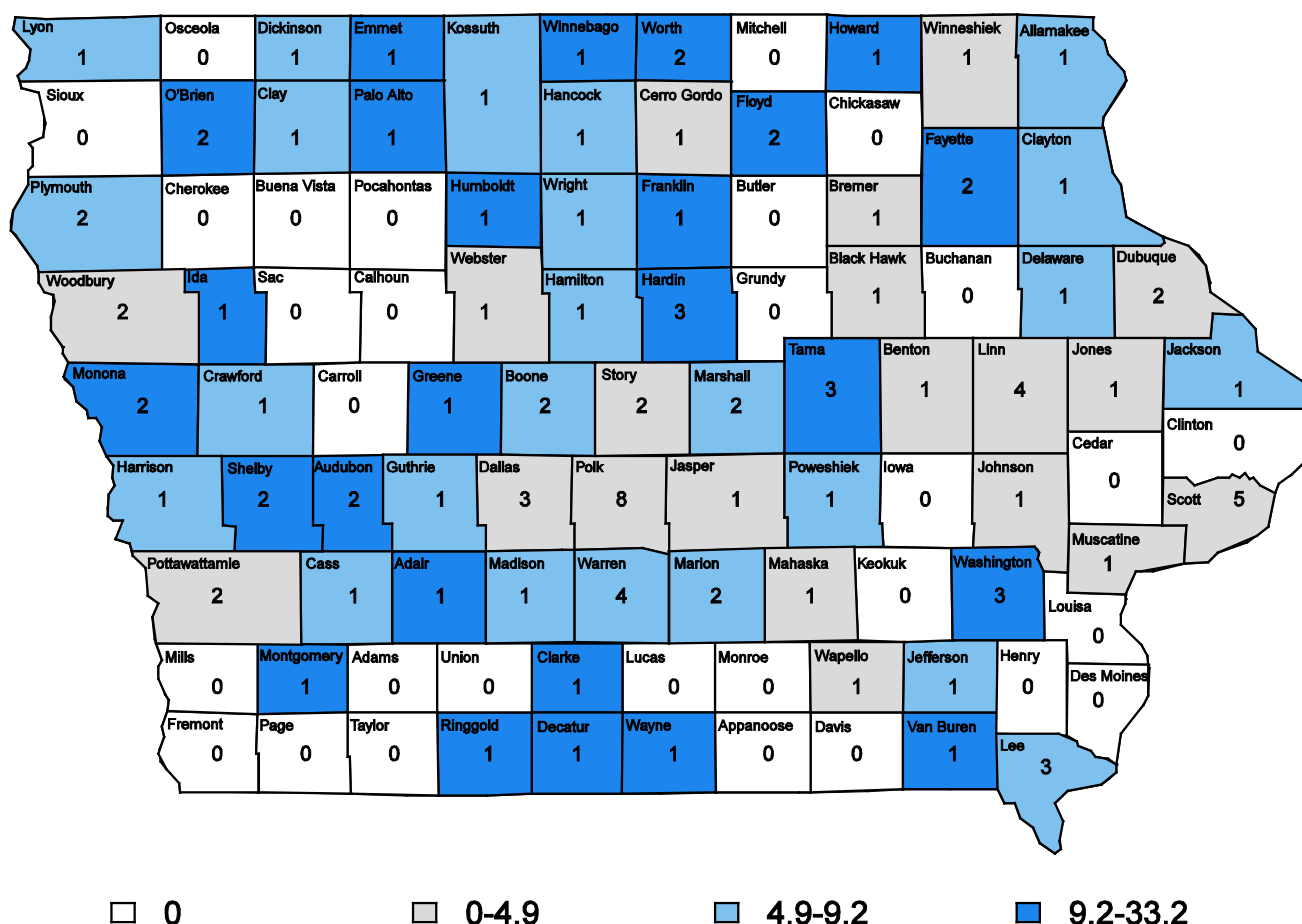
## 2011 Crude Rates by County Group



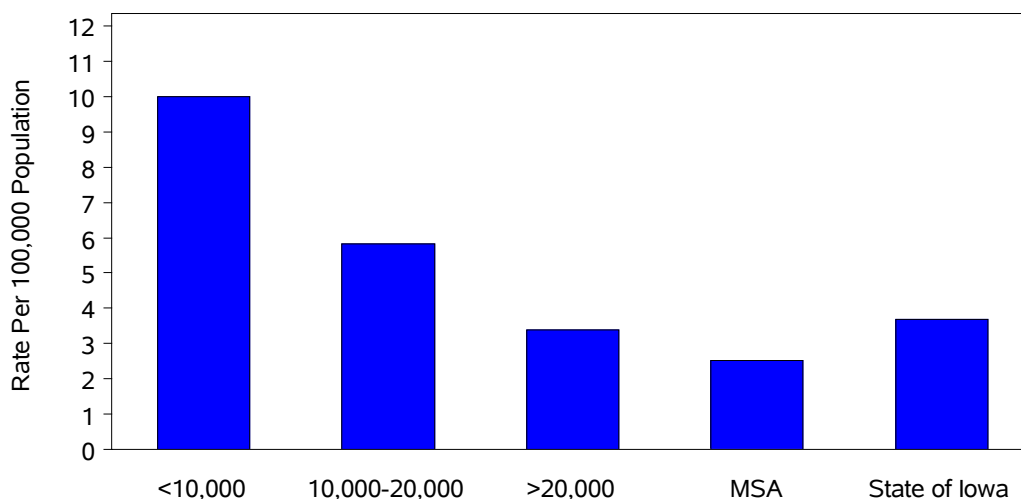


# Chronic Confusion or Dementing Illness Units

2011 Counts and Crude Rates per 100,000 (shaded)



2011 Crude Rates by County Group



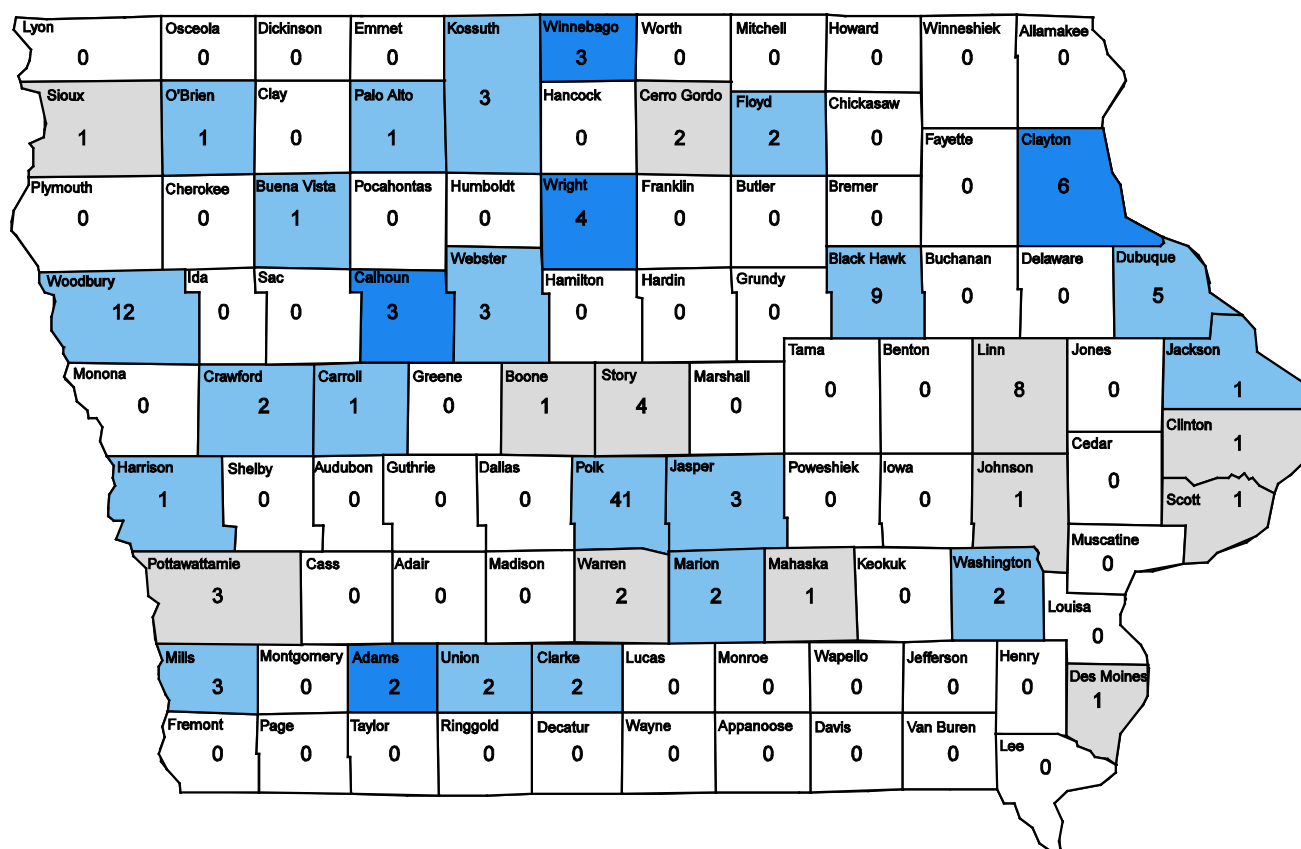
Source: Department of Inspections and Appeals, Iowa Department of Public Health

Lyon	9	Osceola	0	Dickinson	14	Emmet	15	Kossuth	14	Winnebago	14	Worth	27	Mitchell	0	Howard	24	Winnesneke	10	Allamakee	12														
Sioux	0	O'Brien	30	Clay	10	Palo Alto	8	Hancock		12	Cerro Gordo	12	Floyd	34	Chickasaw	0	Fayette	24	Clayton	16															
Plymouth	31	Cherokee	0	Buena Vista	0	Pocahontas	0	Humboldt	24	Wright	20	Franklin	19	Butler	0	Bremer	30	Black Hawk	24	Buchanan	0	Delaware	36	Dubuque	28										
Woodbury	54	Ida	17	Sac	0	Calhoun	0	Webster	30	Hamilton	15	Hardin	50	Grundy	0	Tama	42	Benton	14	Linn	94	Jones	24	Jackson	37										
Monona	20	Crawford	22	Carroll	0	Greene	10	Boone	56	Story	48	Marshall	96	Poweshiek	16	Iowa	0	Johnson	25	Cedar	0	Clinton	0	Scott	149										
Harrison	18	Shelby	34	Audubon	35	Guthrie	16	Dallas	87	Polk	210	Jasper	18	Washington	36	Muscatine	19	Louisa	0	Des Moines	0														
Pottawattamie	37	Cass	24	Adair	12	Madison	18	Warren	100	Marion	32	Mahaska	10	Keokuk	0	Mills	0	Montgomery	16	Adams	0	Union	0	Clarke	42	Lucas	0	Monroe	0	Wapello	20	Jefferson	14	Henry	0
Fremont	0	Page	0	Taylor	0	Ringgold	8	Decatur	12	Wayne	13	Appanoose	0	Davis	0	Van Buren	18	Lee	62																



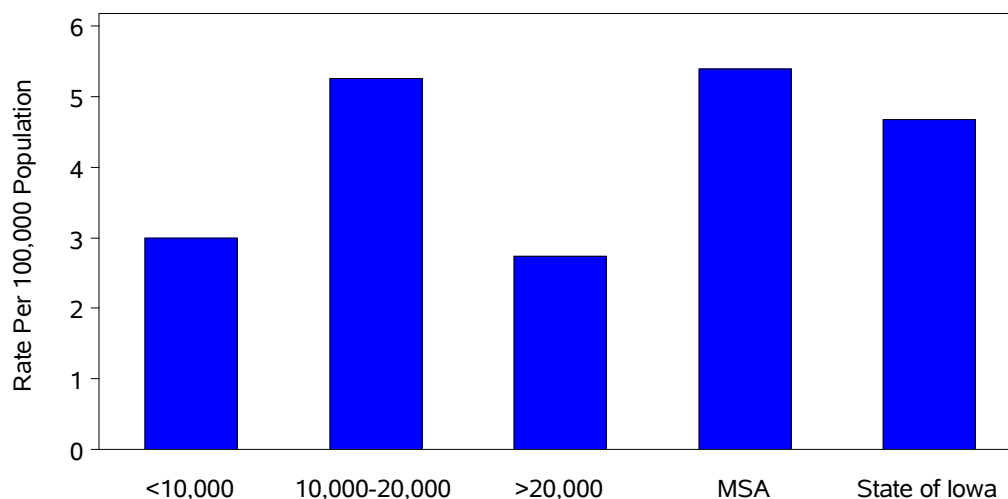
# Intermediate Care Facilities for the Mentally Retarded

2011 Counts and Crude Rates per 100,000 (shaded)



0
  0-4.7
  4.7-23.1
  23.1-50.9

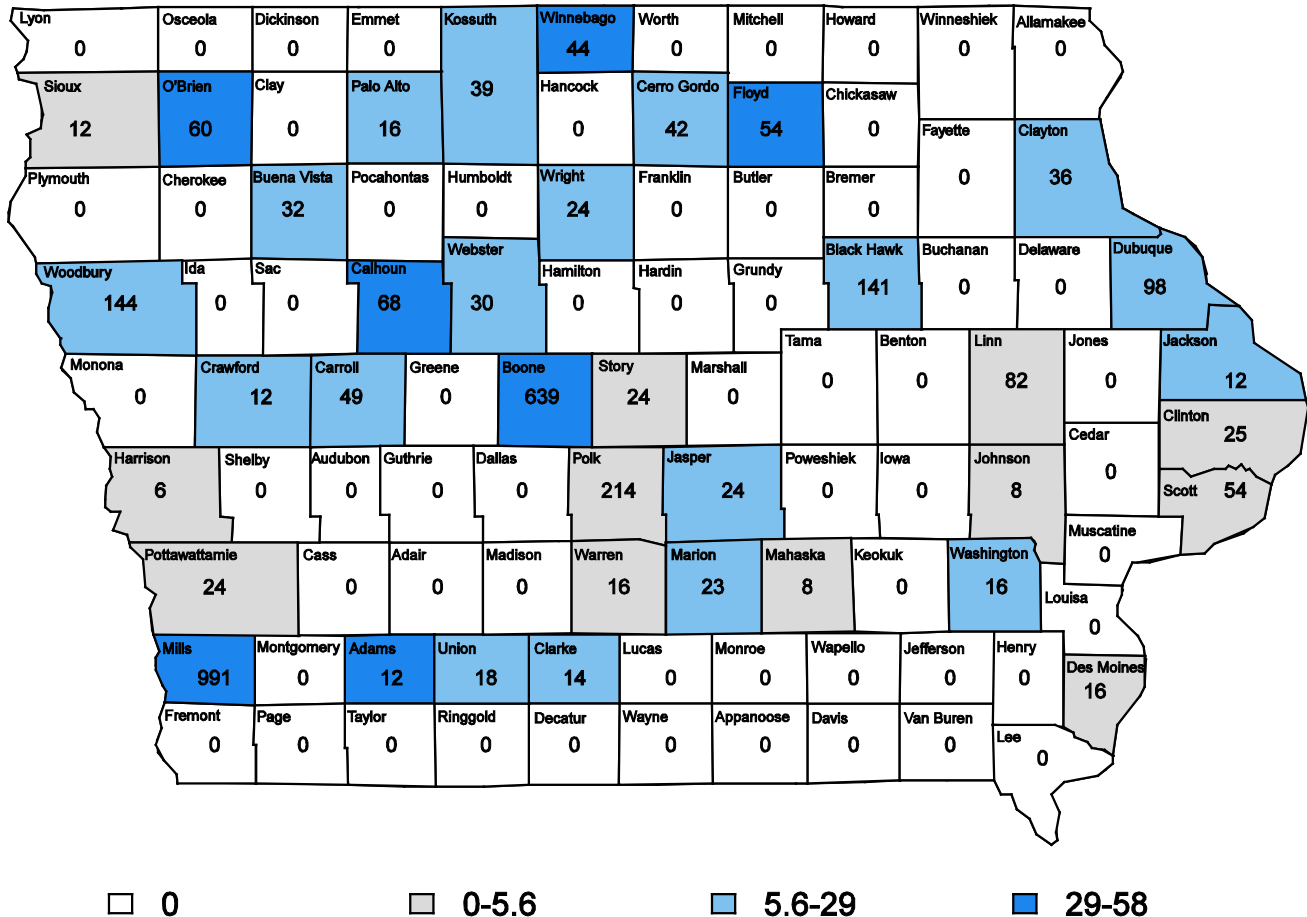
2011 Crude Rates by County Group



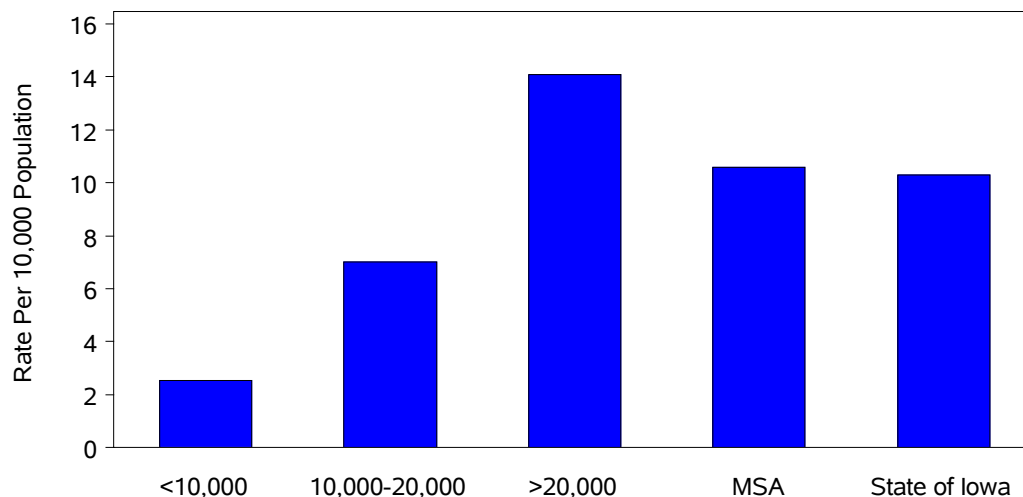
Source: Department of Inspections and Appeals, Iowa Department of Public Health

## Intermediate Care Beds for the Mentally Retarded

2011 Counts and Crude Rates per 10,000 (shaded)



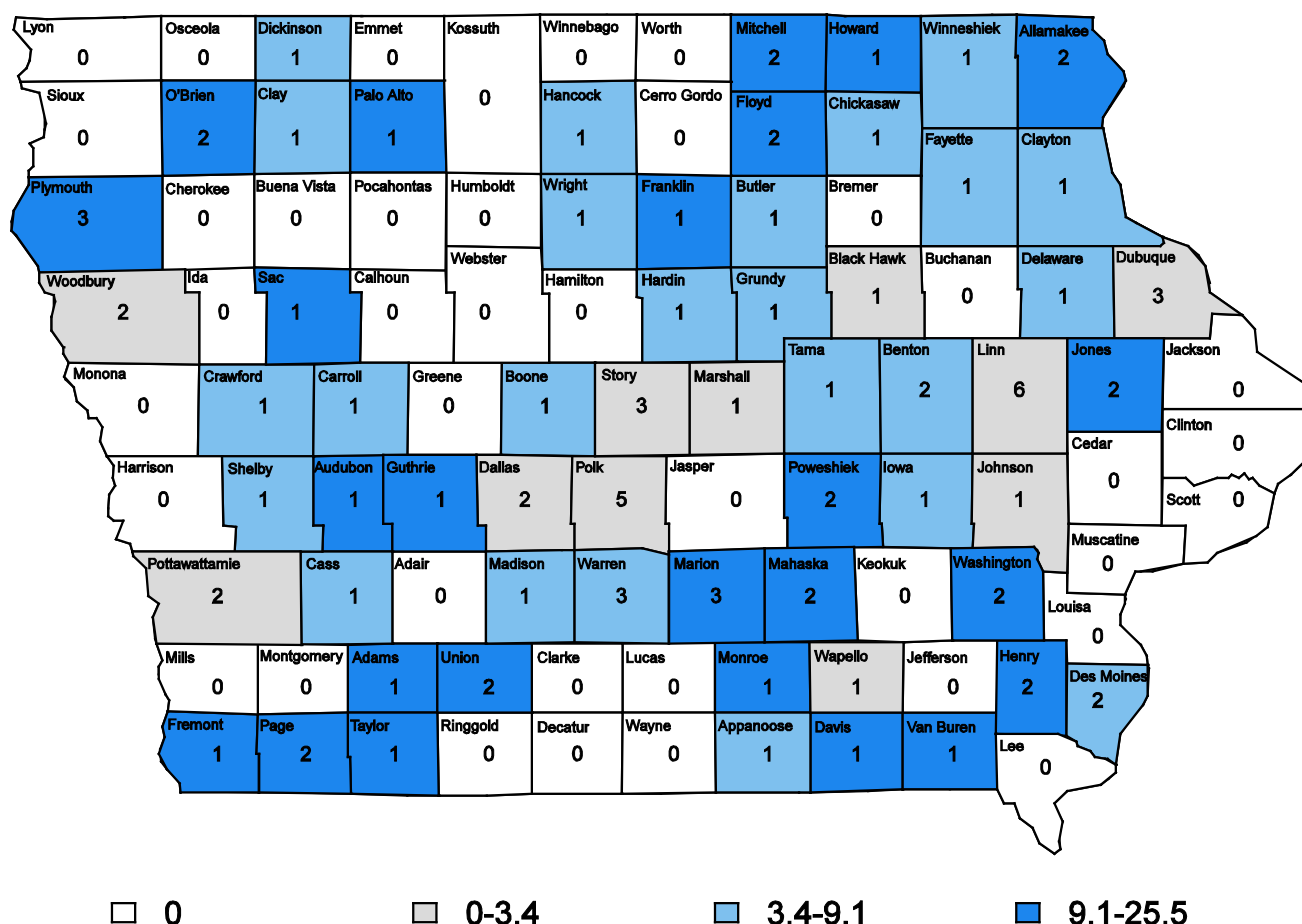
2011 Crude Rates by County Group



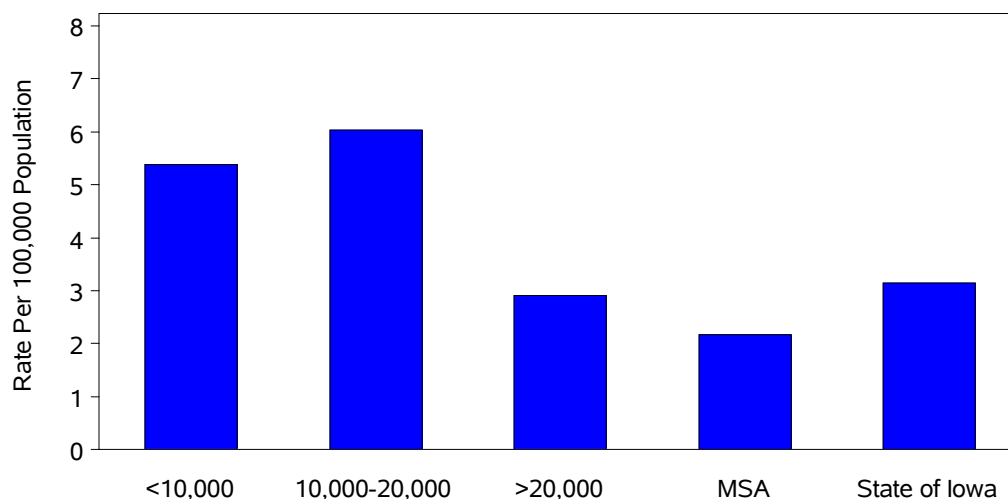
Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Residential Care Facilities

## 2011 Counts and Crude Rates per 100,000 (shaded)



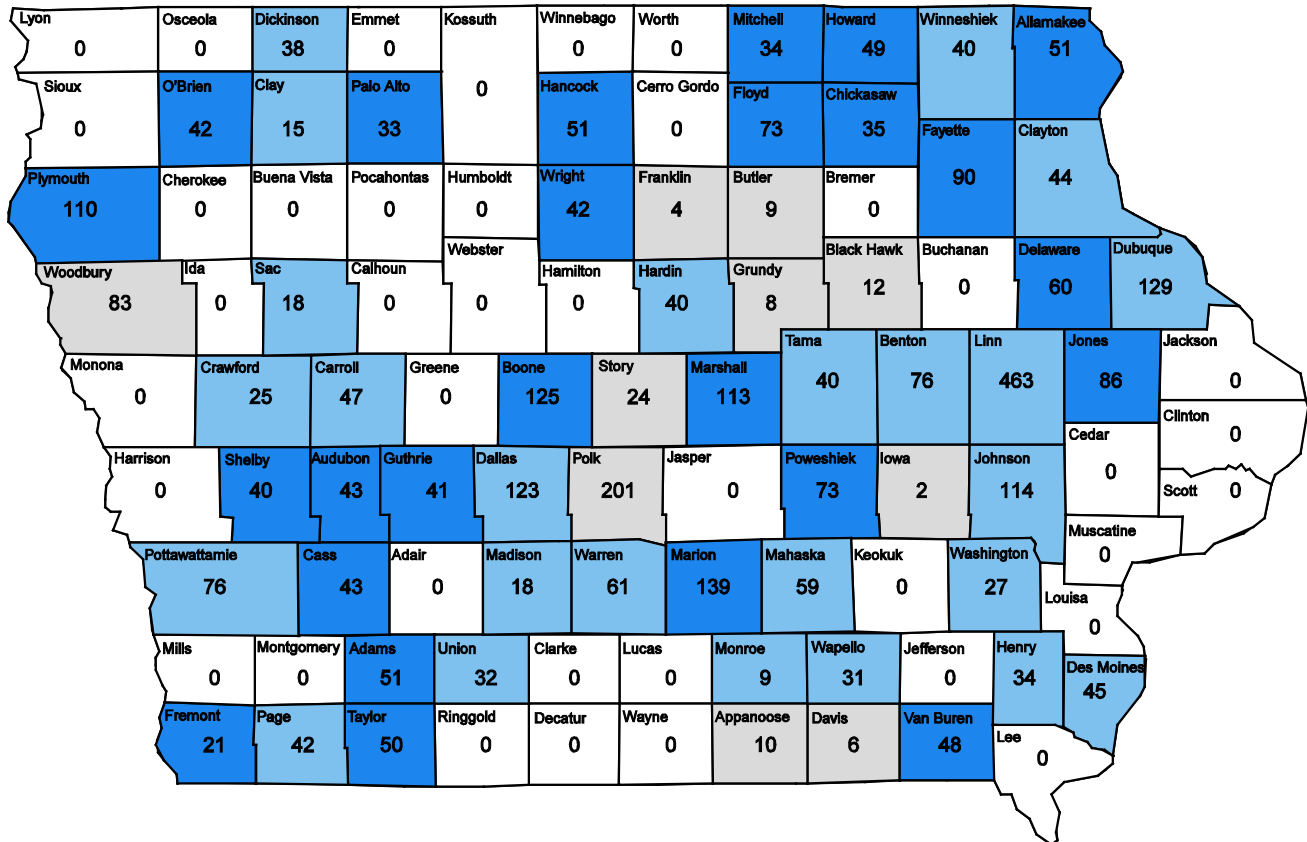
## 2011 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

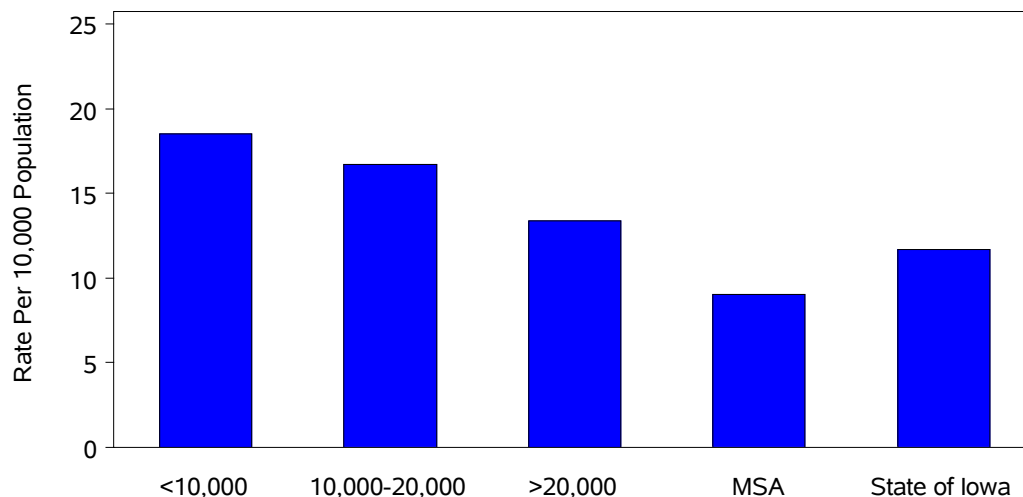
## Beds in Residential Care Facilities

2011 Counts and Crude Rates per 10,000 (shaded)



0
  0-8.4
  8.4-28.6
  28.6-129.8

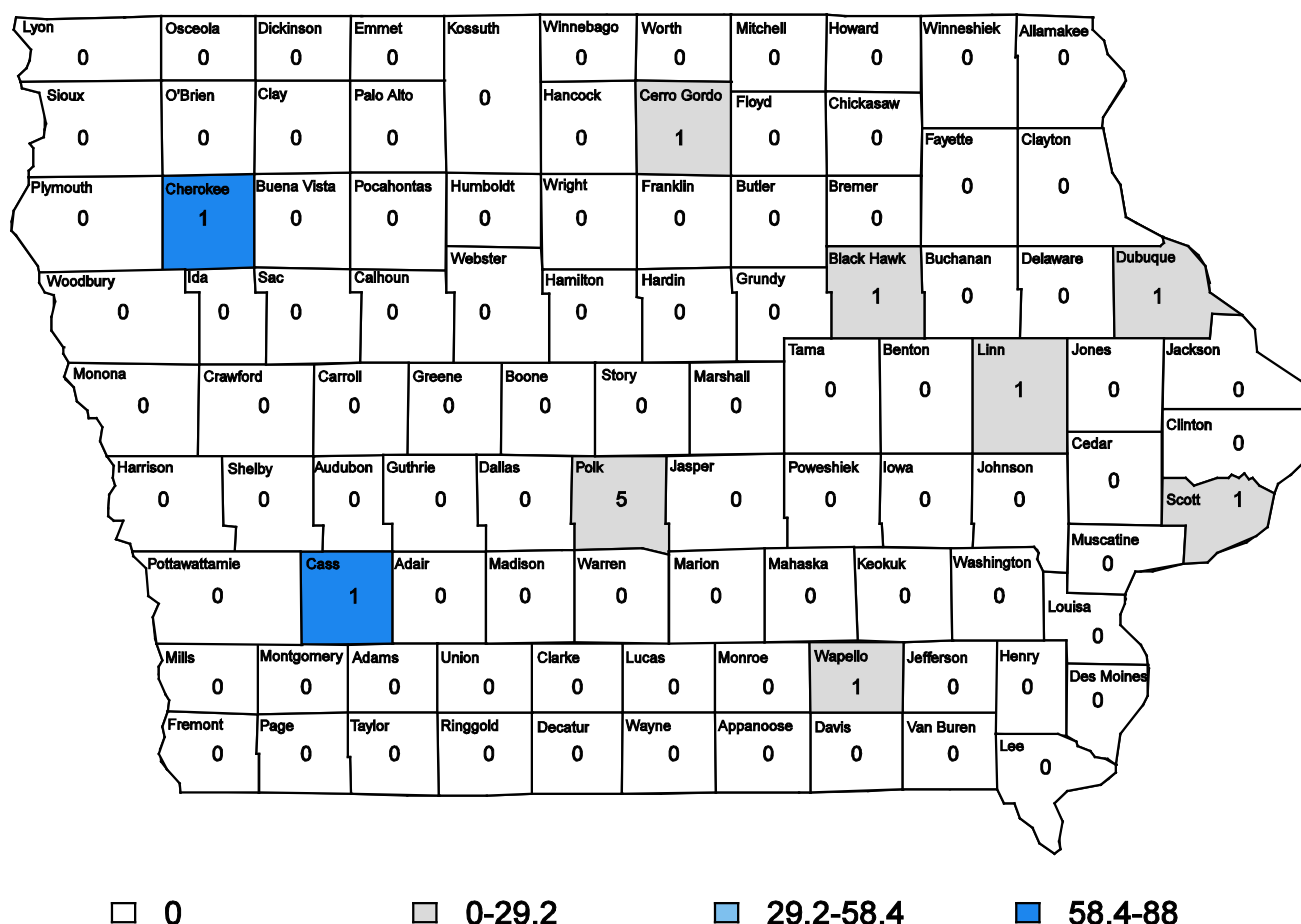
### 2011 Crude Rates by County Group



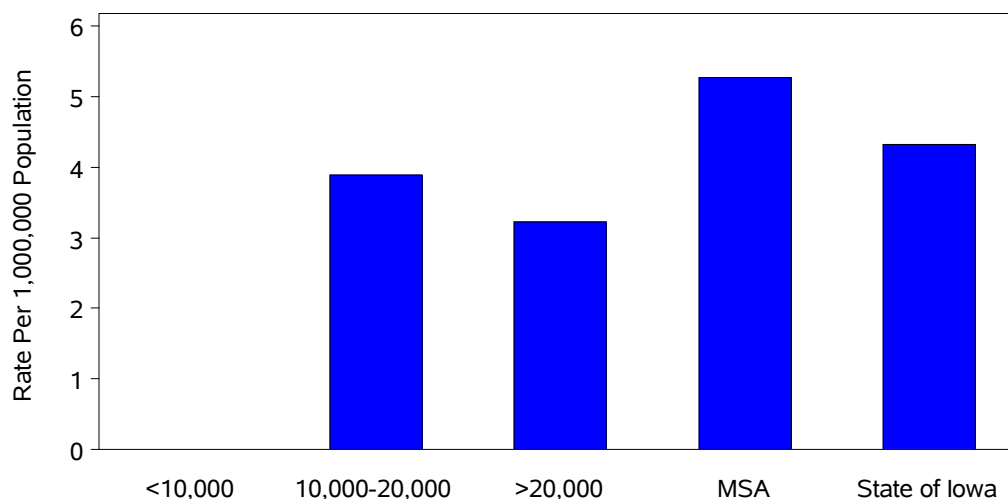
Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Residential Care Facilities for Persons with Mental Illness

2011 Counts and Crude Rates per 1,000,000 (shaded)



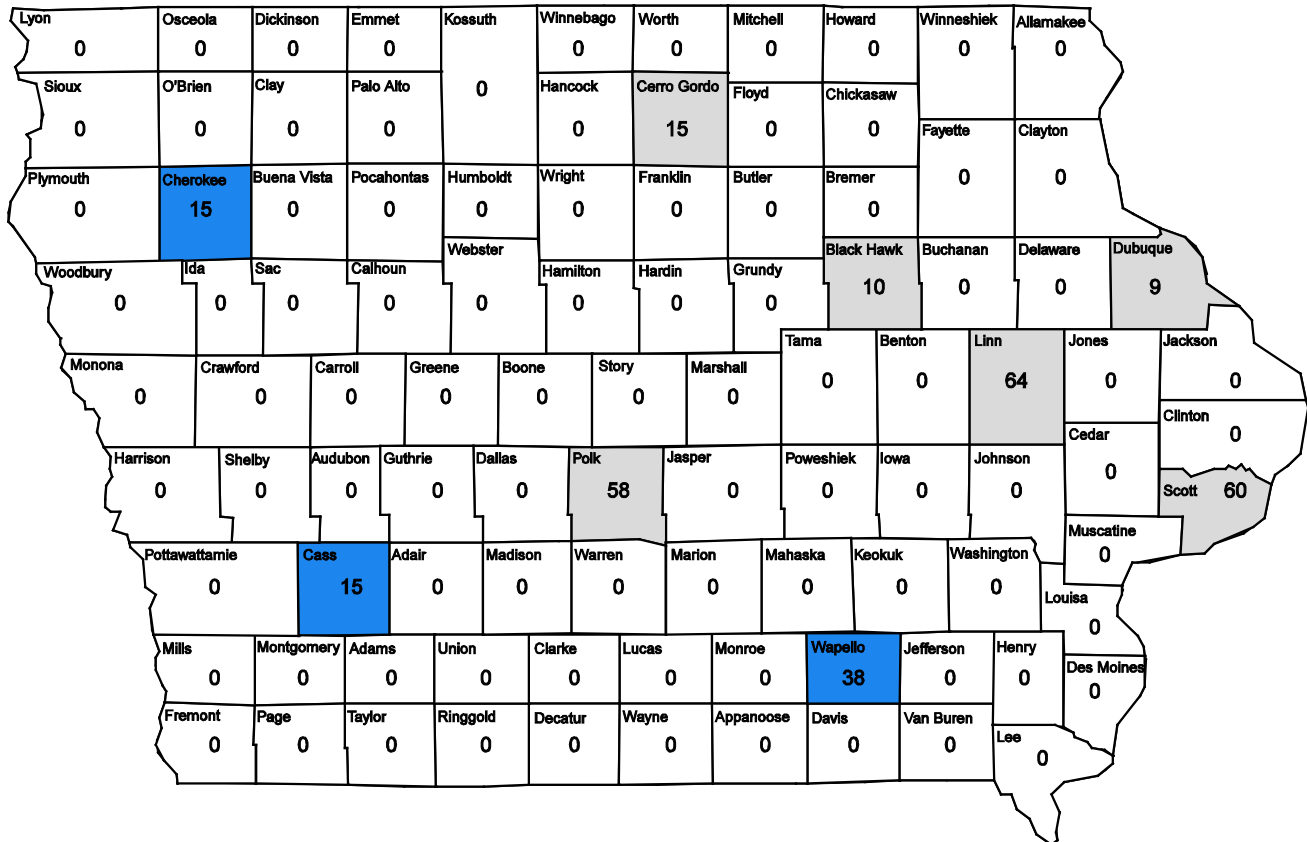
2011 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

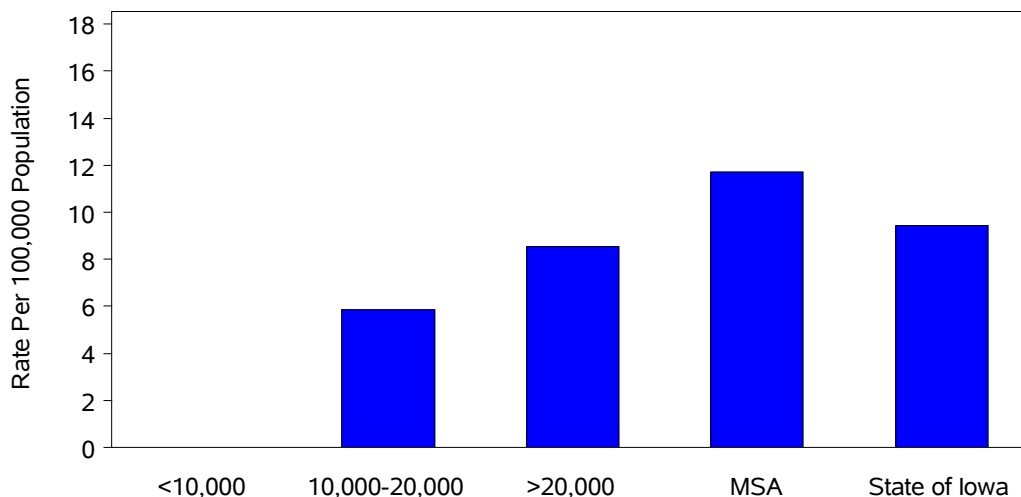
# Beds in Residential Care Facilities for Persons with Mental Illness

2011 Counts and Crude Rates per 100,000 (shaded)



0 0-50 50-100 100-132

2011 Crude Rates by County Group

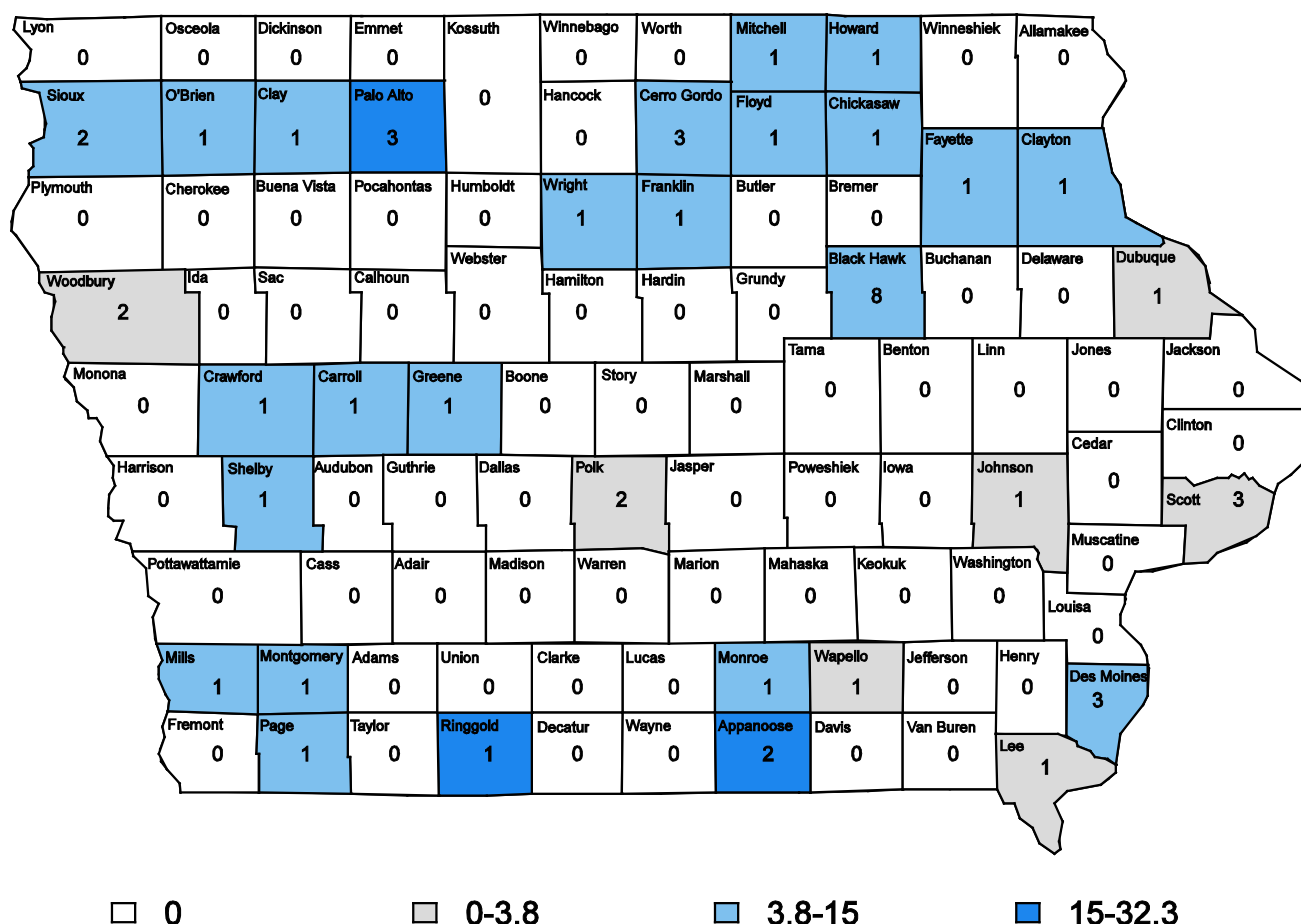


Source: Department of Inspections and Appeals, Iowa Department of Public Health

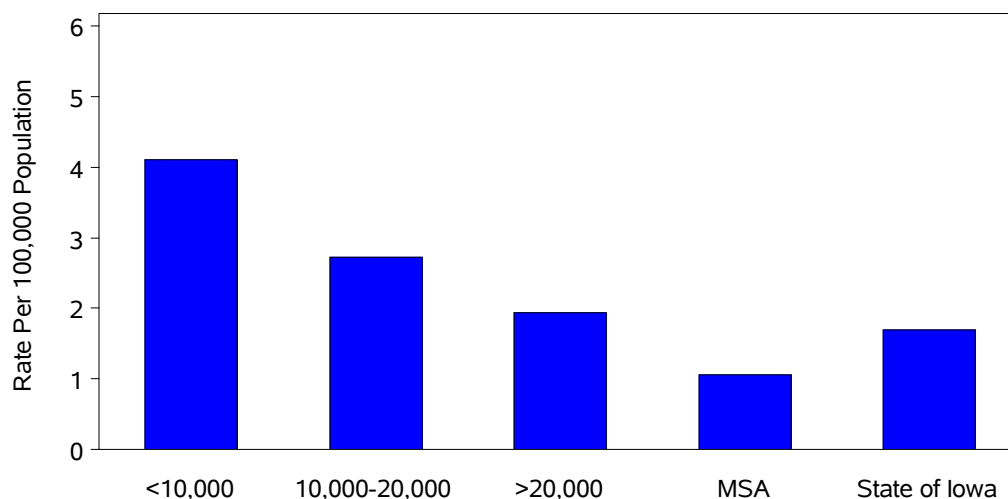


# Residential Care Facilities for the Mentally Retarded

2011 Counts and Crude Rates per 100,000 (shaded)



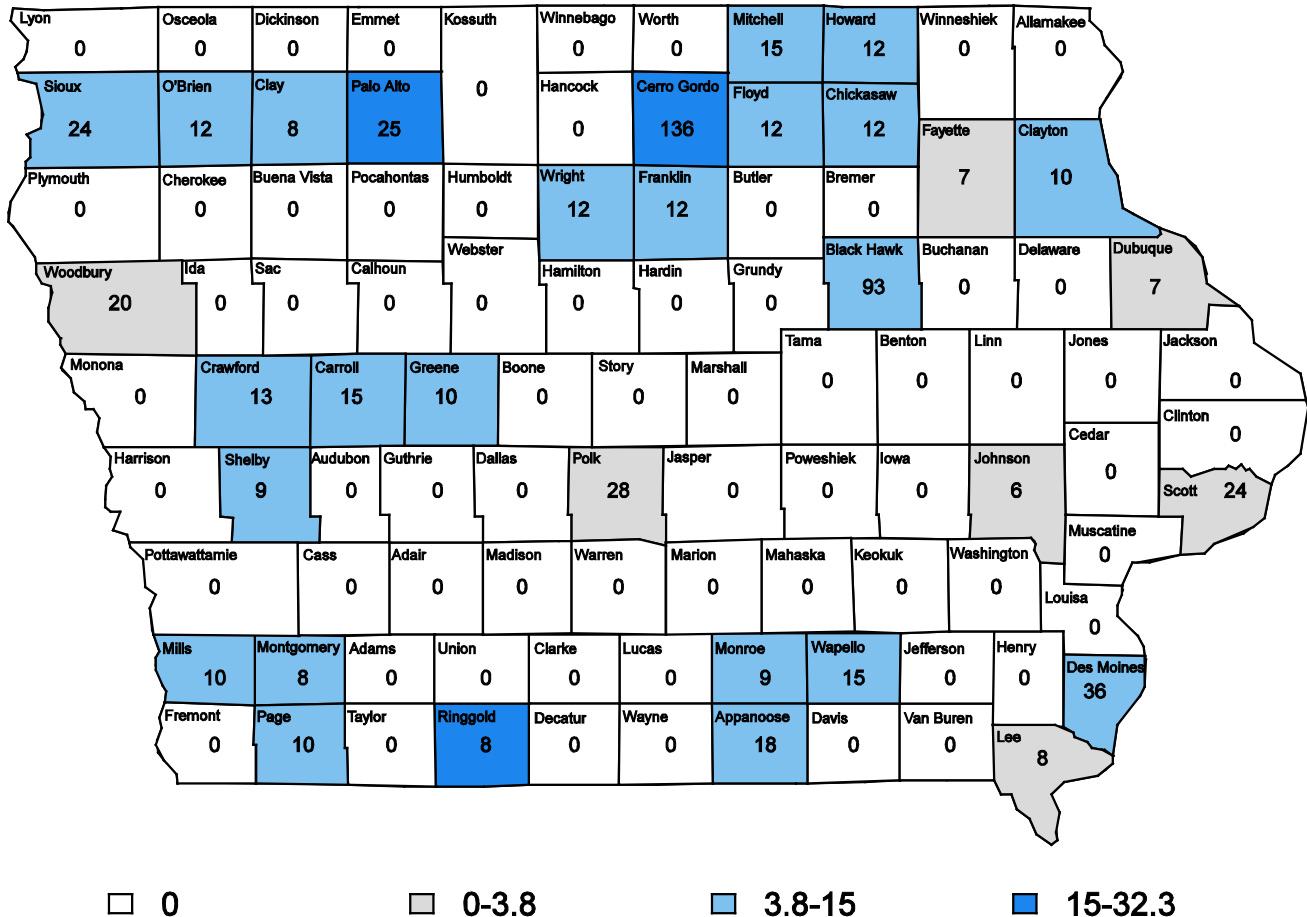
2011 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

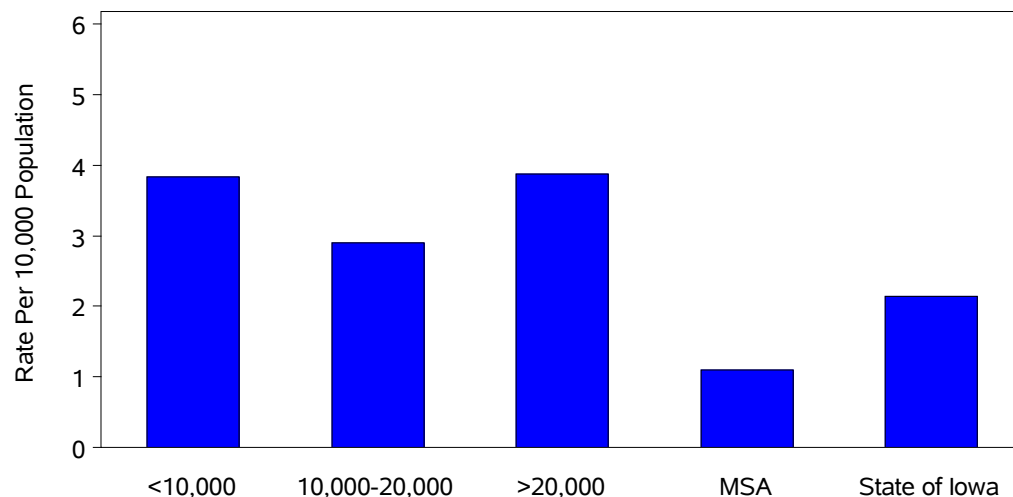
# Beds in Residential Care Facilities for the Mentally Retarded

2011 Counts and Crude Rates per 10,000 (shaded)



0 0-3.8 3.8-15 15-32.3

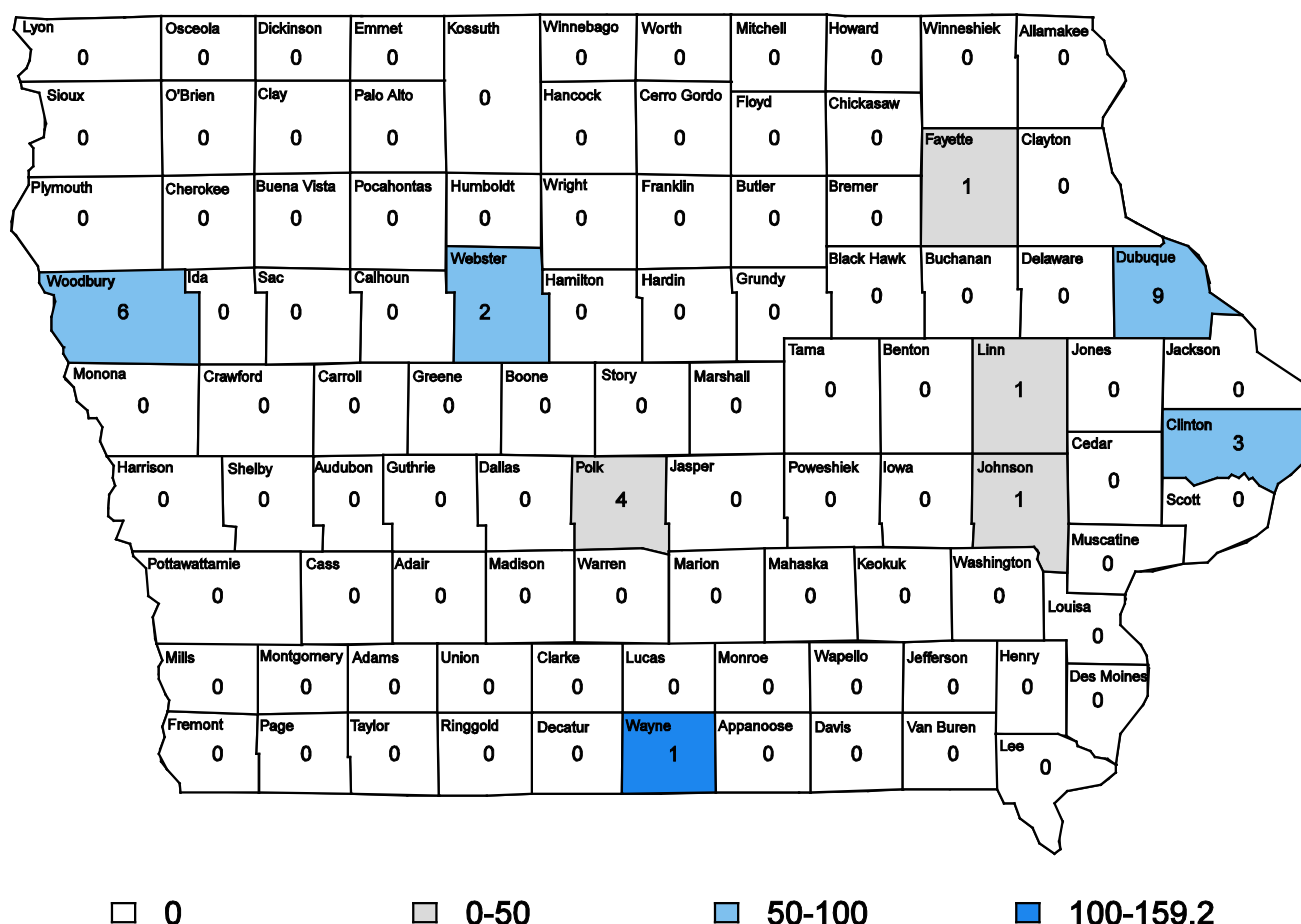
2011 Crude Rates by County Group



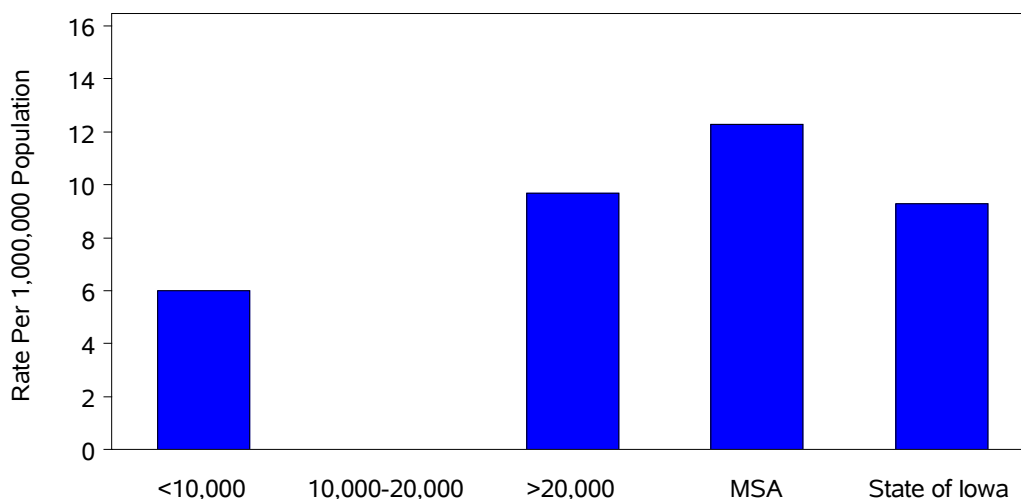
Source: Department of Inspections and Appeals, Iowa Department of Public Health

## 3-5 Bed Units for the Mentally Retarded

2011 Counts and Crude Rates per 100,000 (shaded)



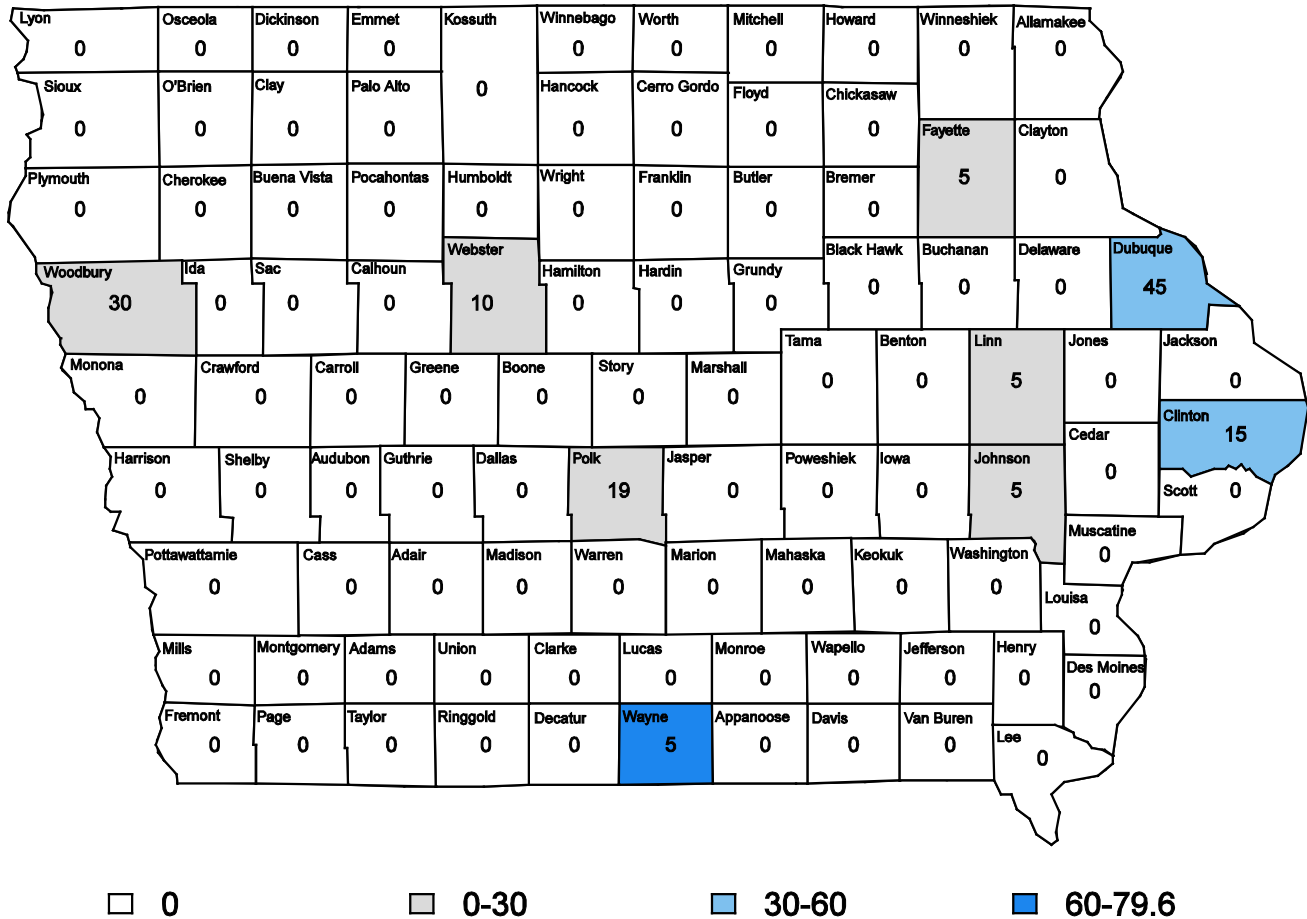
2011 Crude Rates by County Group



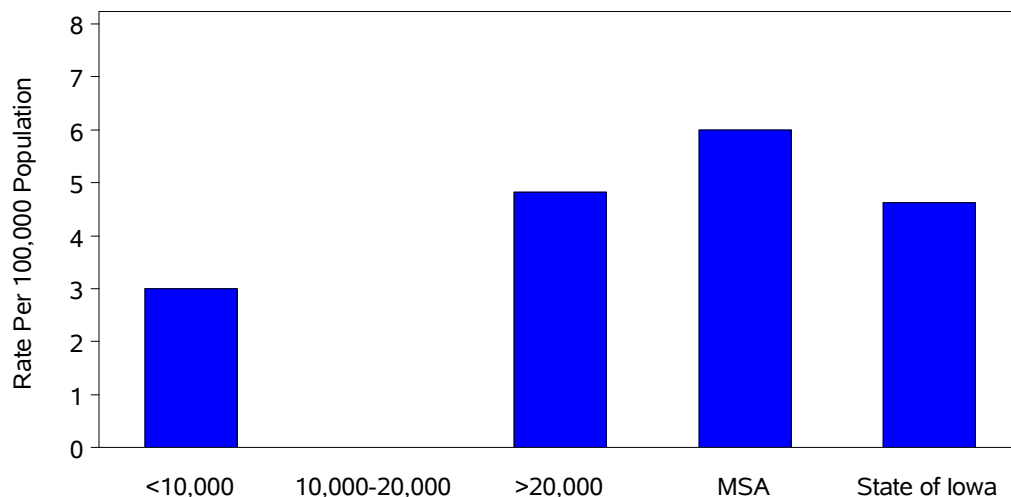
Source: Department of Inspections and Appeals, Iowa Department of Public Health

## Beds in 3-5 Bed Units for the Mentally Retarded

2011 Counts and Crude Rates per 100,000 (shaded)



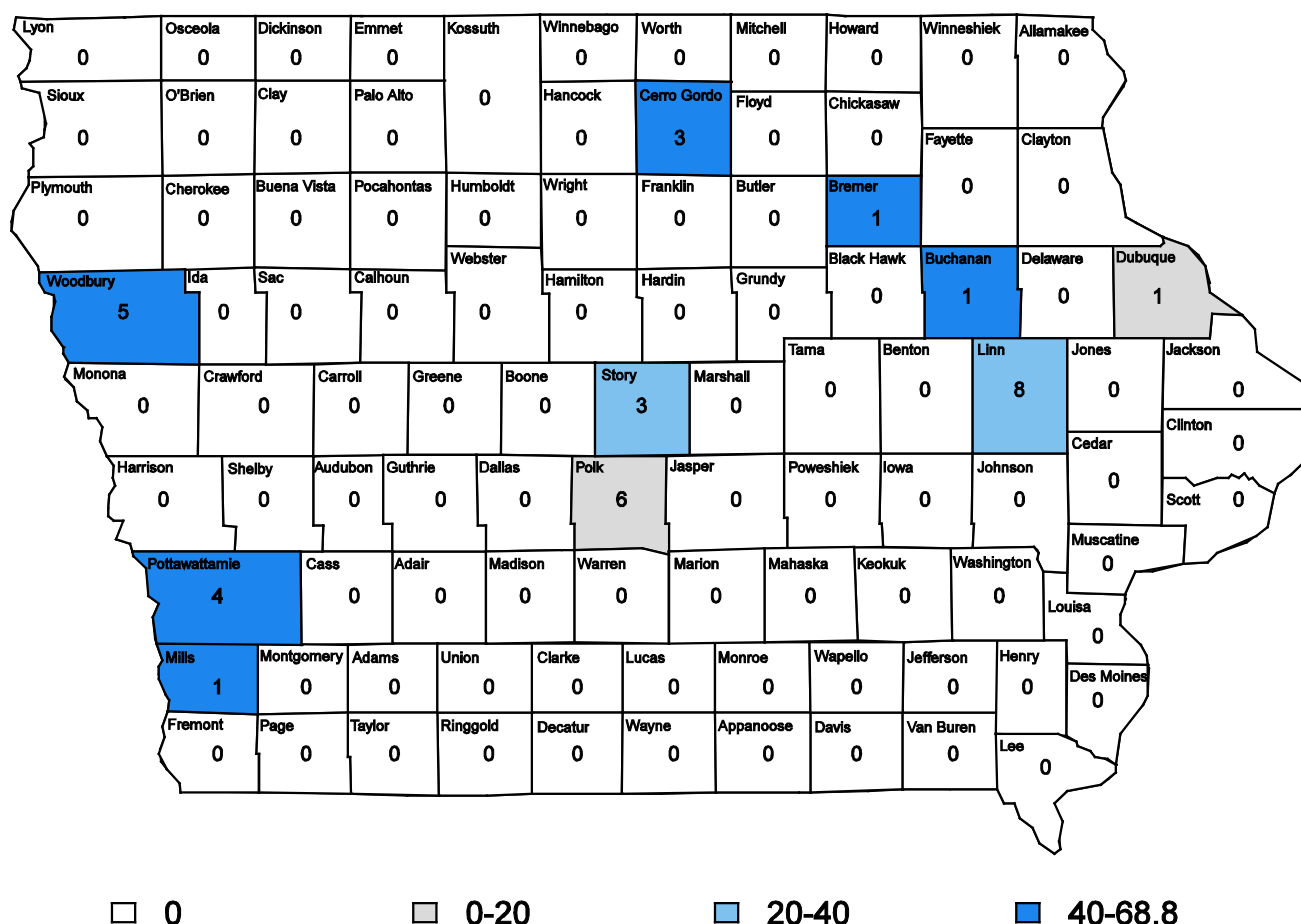
2011 Crude Rates by County Group



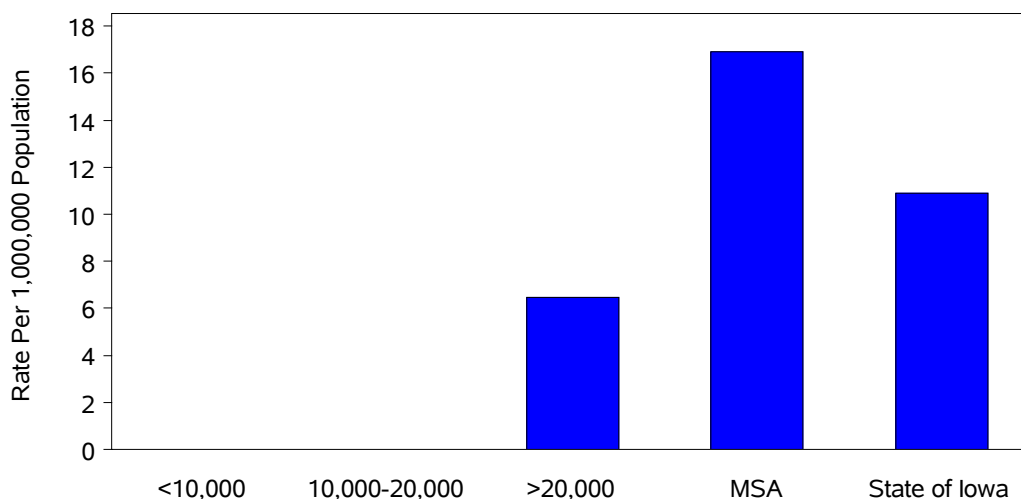
Source: Department of Inspections and Appeals, Iowa Department of Public Health

# Psychiatric Medical Institutions for Children

2011 Counts and Crude Rates per 100,000 (shaded)



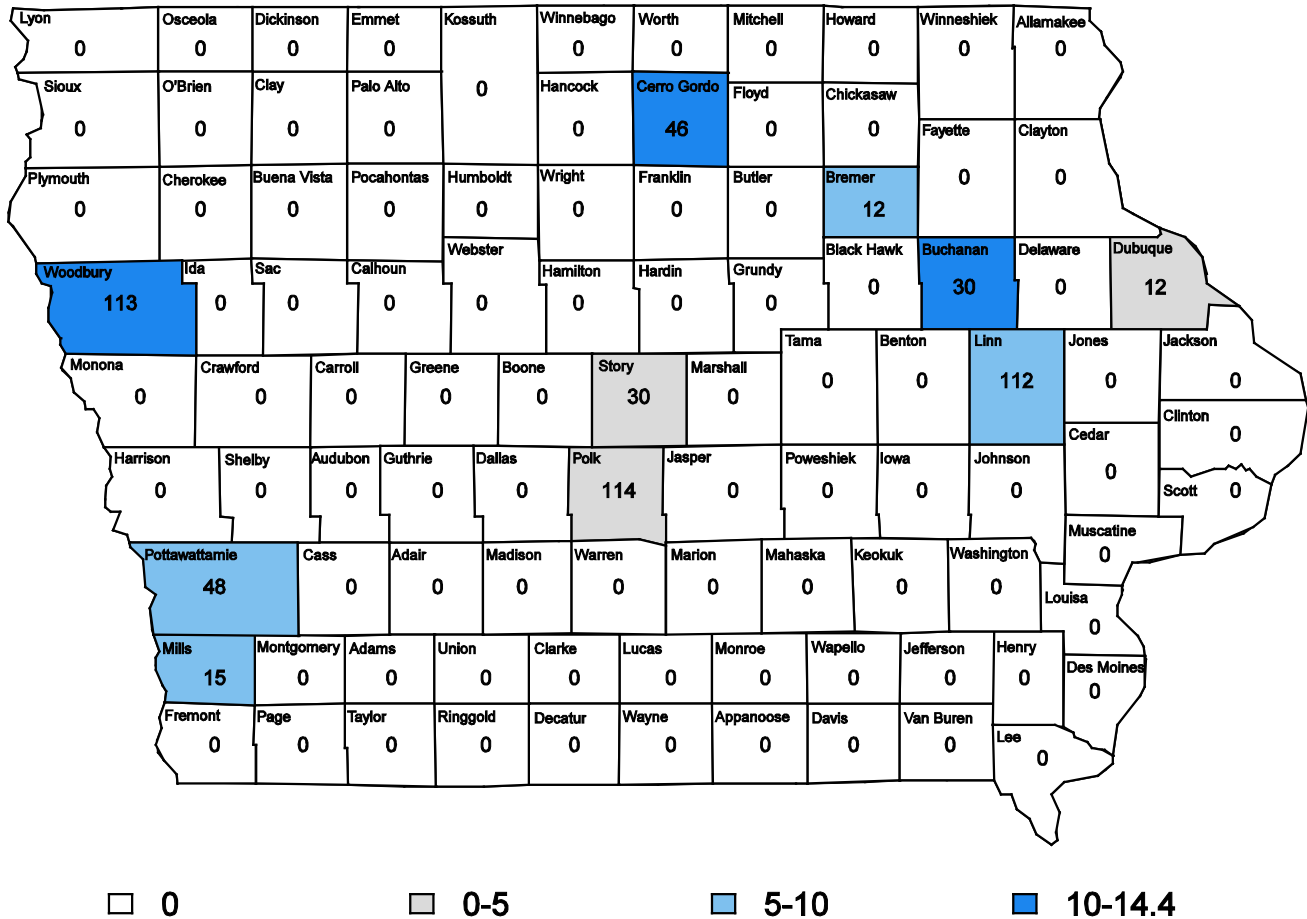
2011 Crude Rates by County Group



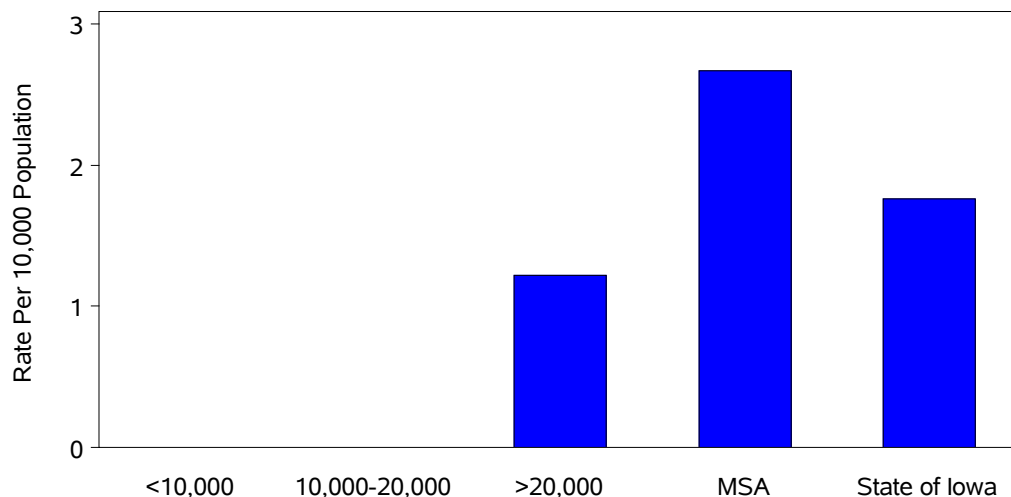
Source: Department of Inspections and Appeals, Iowa Department of Public Health

## Beds in Psychiatric Medical Institutions for Children

2011 Counts and Crude Rates per 100,000 (shaded)



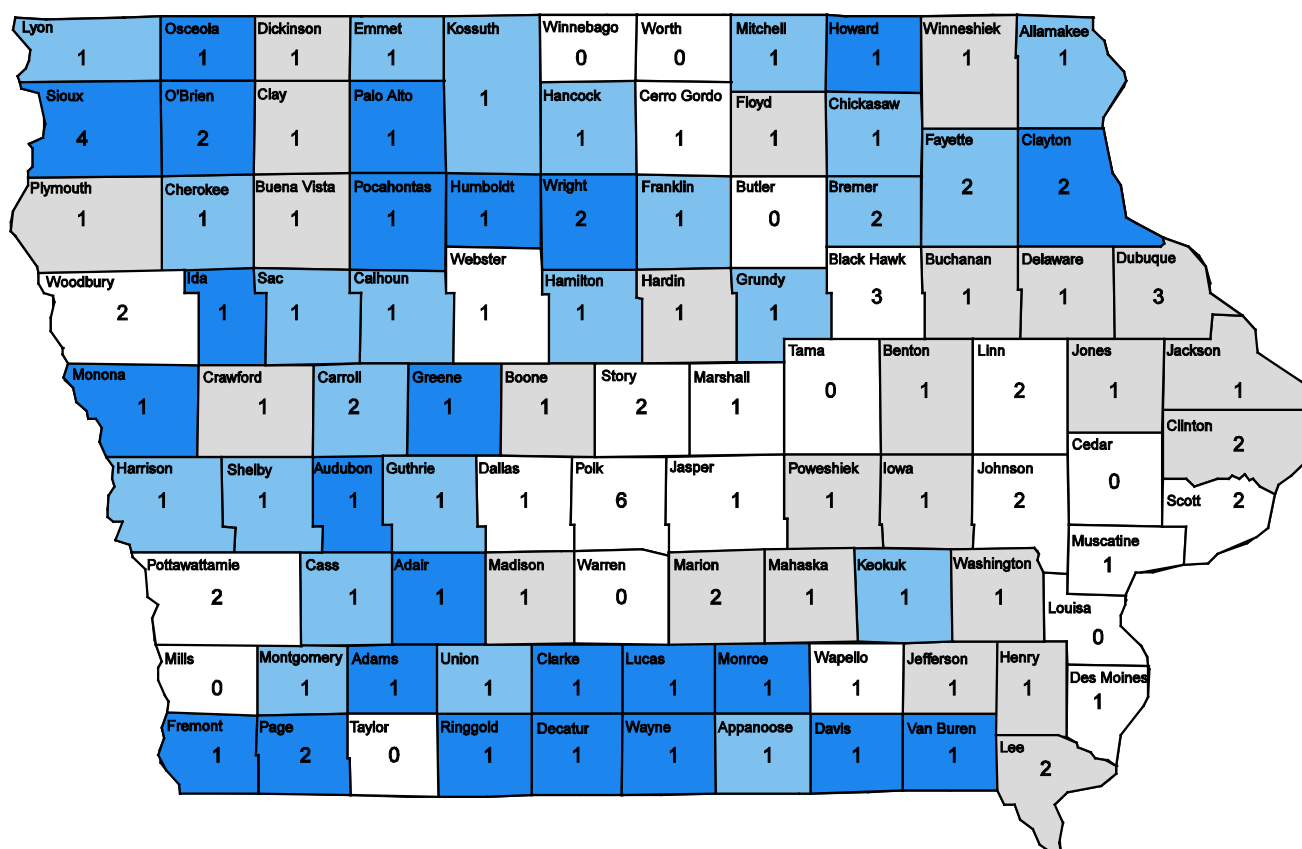
2011 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

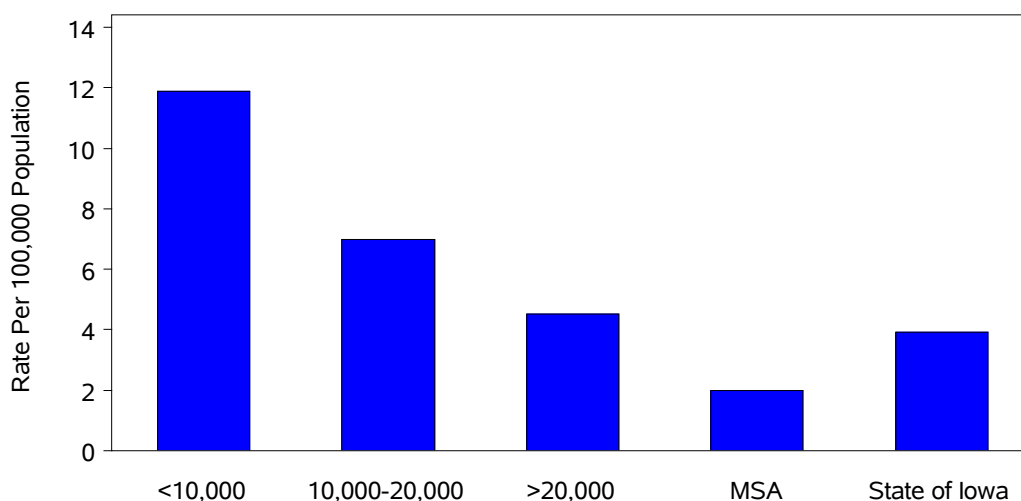
# Total Trauma Care Facilities

2011 Counts and Crude Rates per 100,000 (shaded)



0-3
  3-6.5
  6.5-10.5
  10.5-25.5

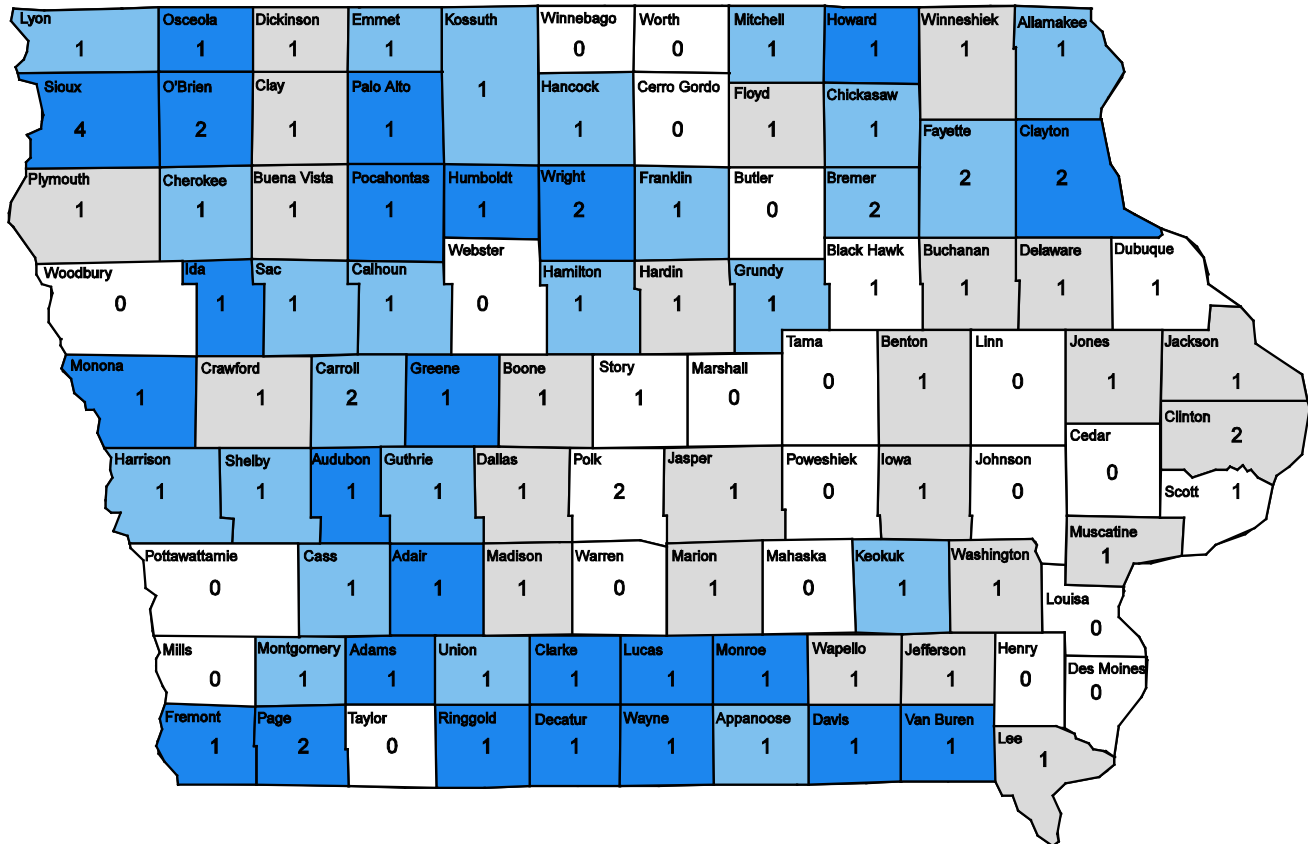
## 2011 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health

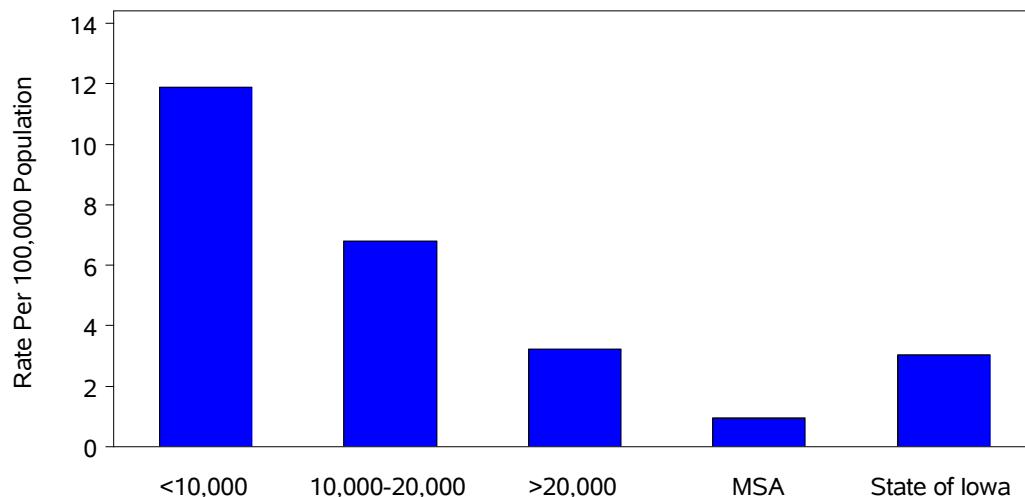
## Community Trauma Care Facilities

2011 Counts and Crude Rates per 100,000 (shaded)



0-1.4
  1.4-6.5
  6.5-10.5
  10.5-25.5

2011 Crude Rates by County Group

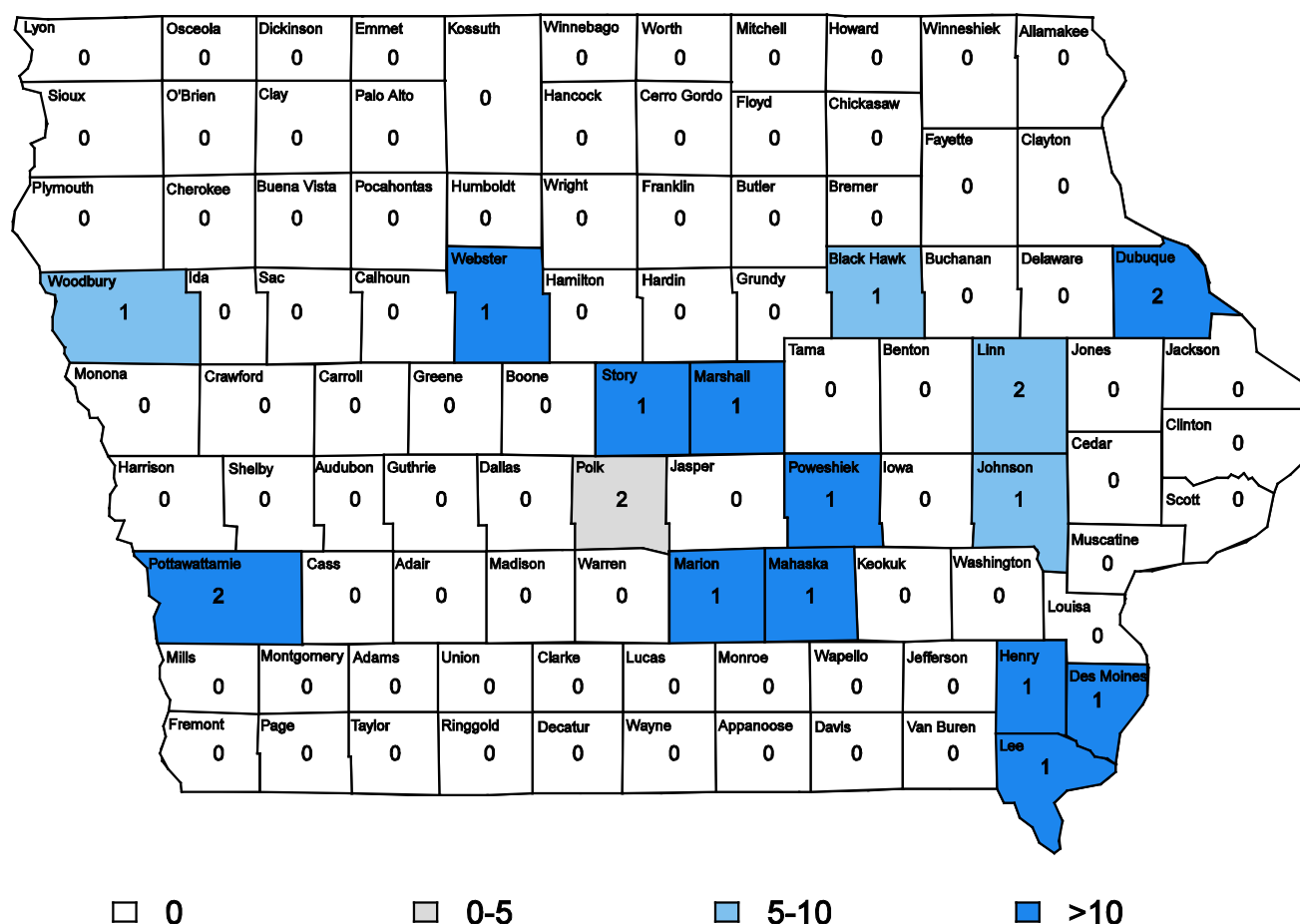


Source: Department of Inspections and Appeals, Iowa Department of Public Health

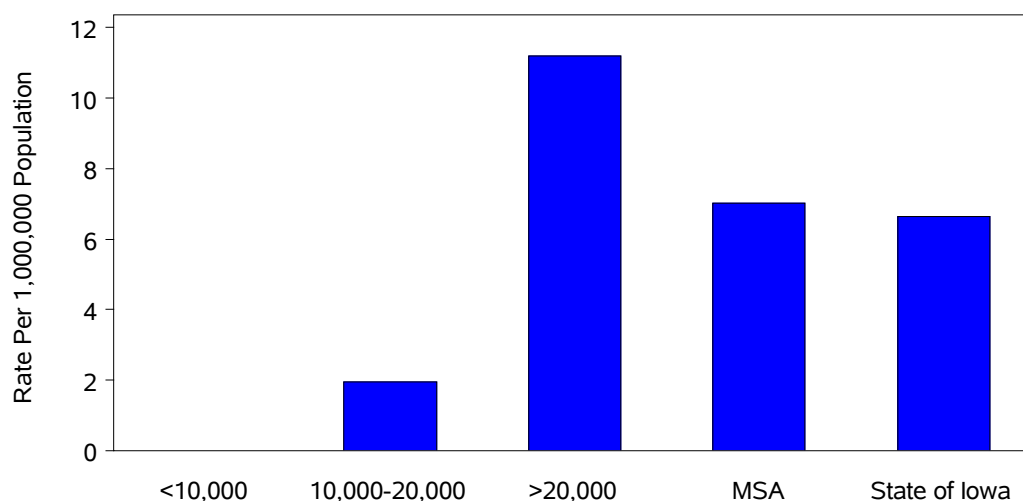


## Area Trauma Care Facilities

2011 Counts and Crude Rates per 100,000 (shaded)



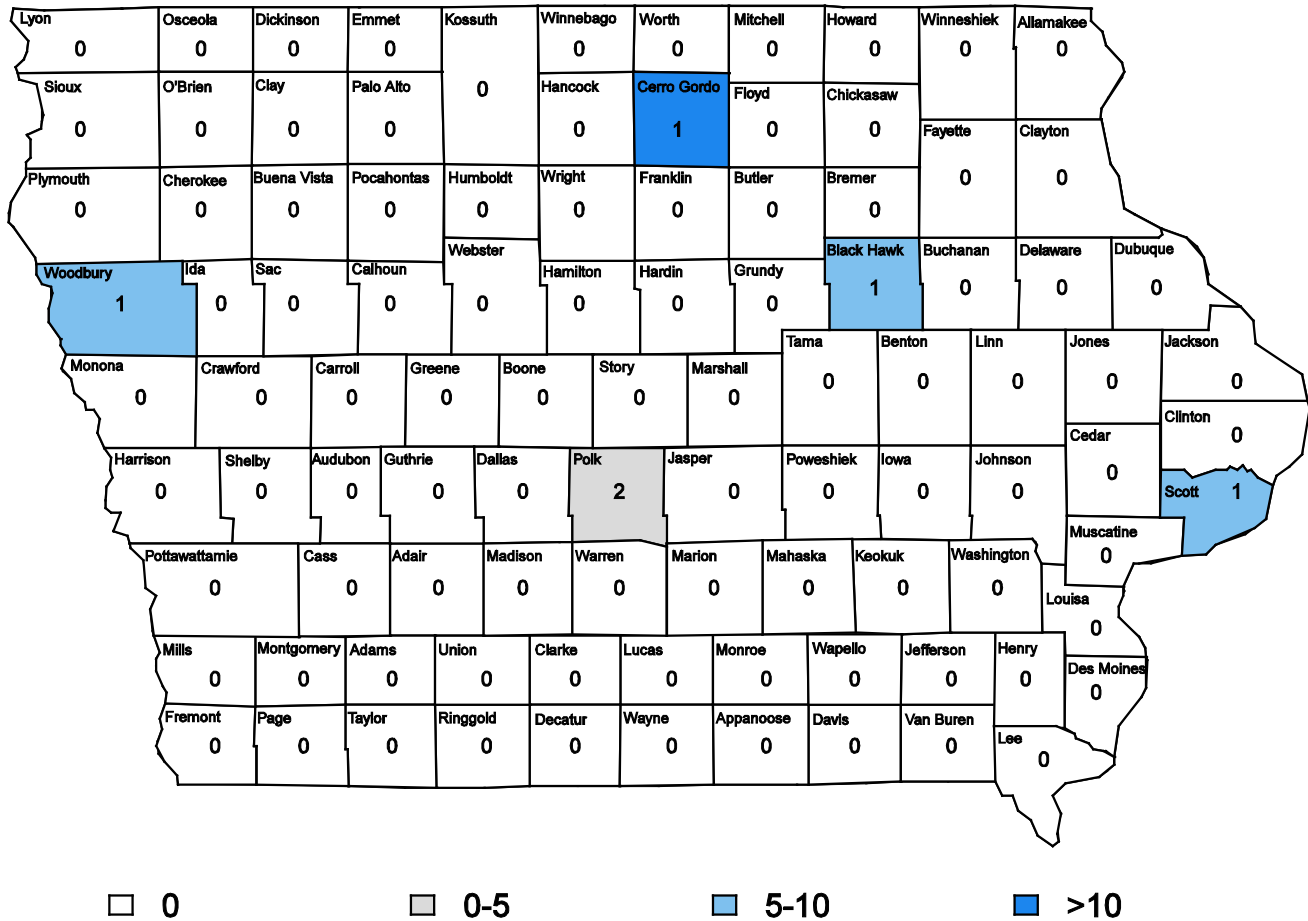
2011 Crude Rates by County Group



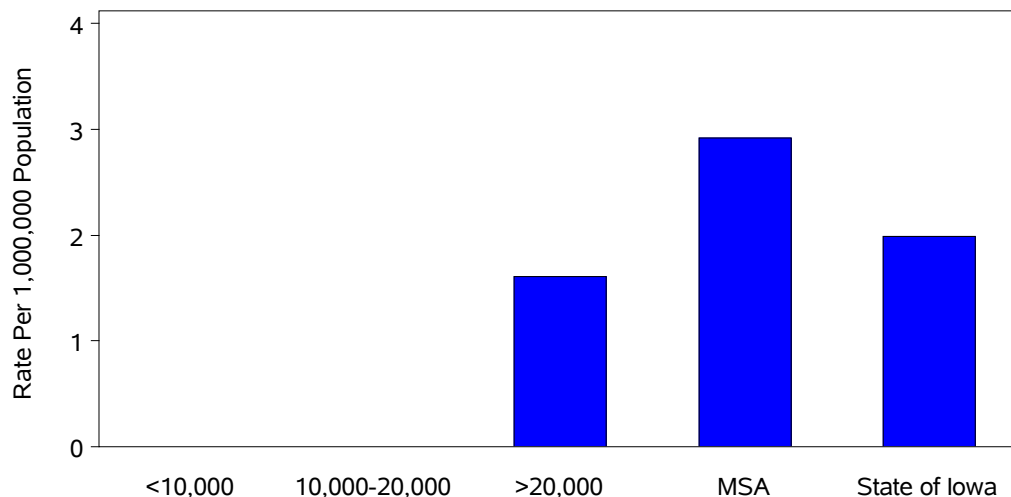
Source: Department of Inspections and Appeals, Iowa Department of Public Health

## THE 2011 IOWA HEALTH FACT BOOK

Source: Department of Inspections and Appeals, Iowa Department of Public Health

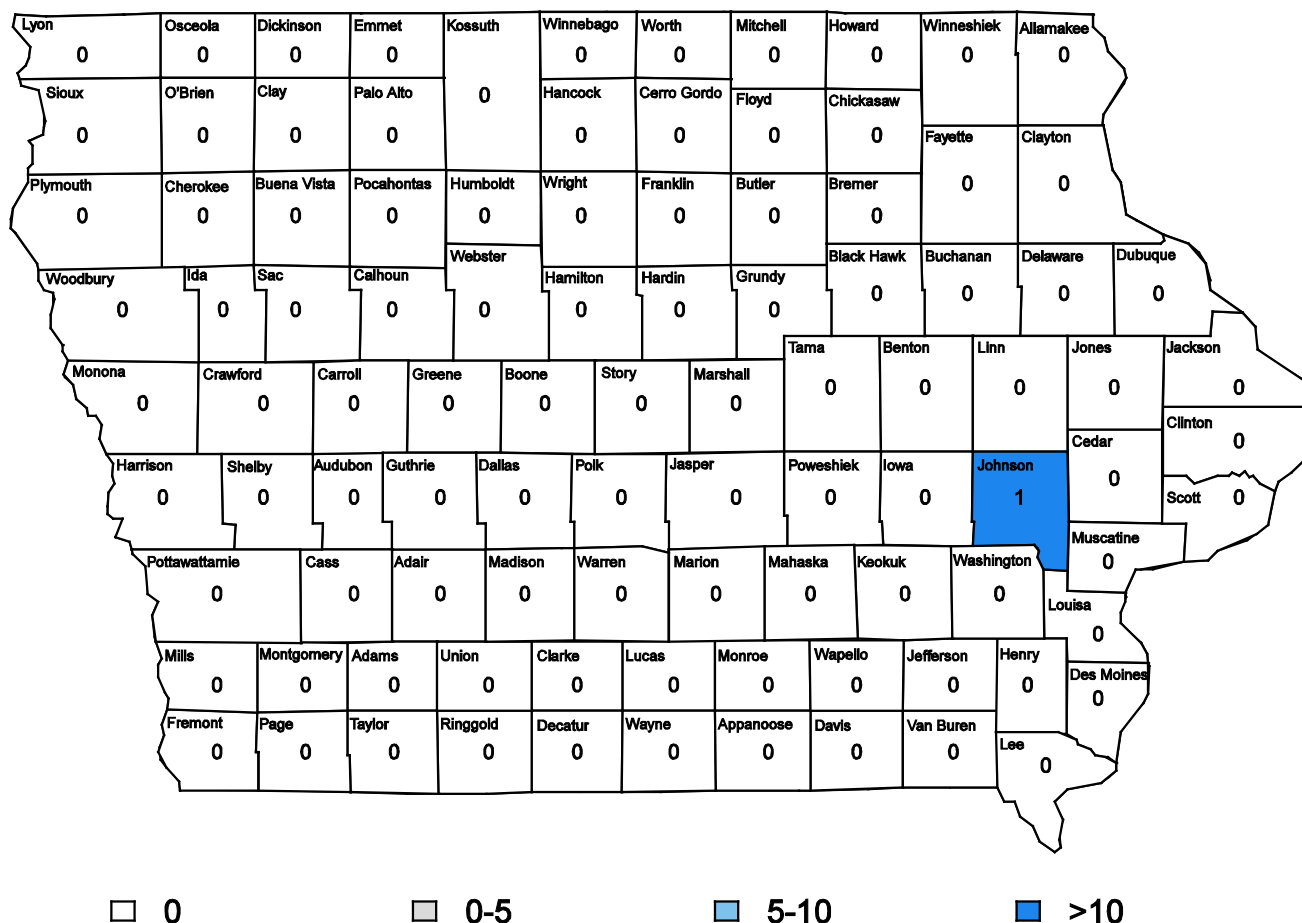


## 2011 Crude Rates by County Group

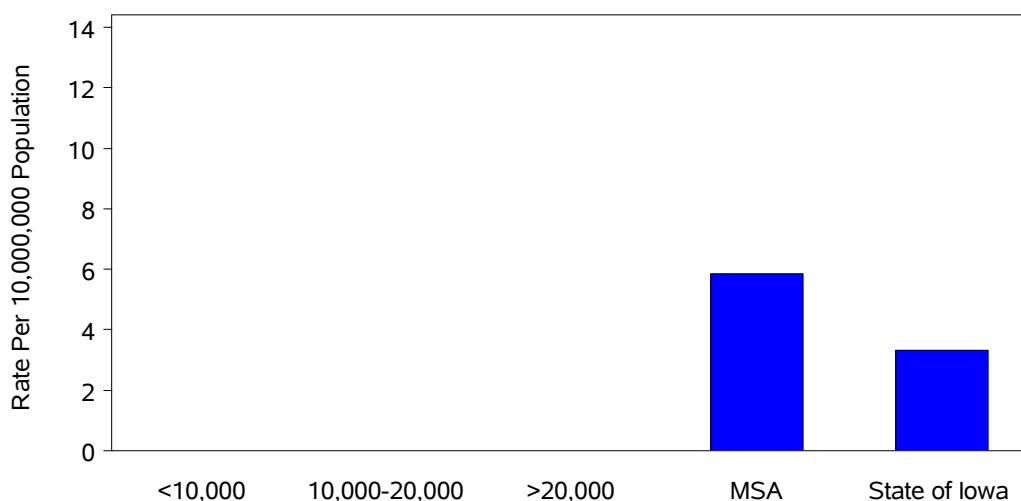


## Resource Trauma Care Facilities

2011 Counts and Crude Rates per 100,000 (shaded)



### 2011 Crude Rates by County Group



Source: Department of Inspections and Appeals, Iowa Department of Public Health



## Environmental Health Indicators

Whether one considers climate change or water quality, it is clear that the environment affects individuals both directly and indirectly. While some environmental health issues have existed throughout history and prehistory, most have become evident in the last few centuries. These problems have emerged as a result of a growing and changing population. The industrial revolution created air and water pollution problems as well as overcrowding and sanitation issues. As of July 2011, over 6.95 billion people inhabited the earth.

The environment plays a role in many of the health issues discussed previously in this book, including birth defects, cancer, respiratory diseases, and many infectious diseases. Other concerns include allergies, fertility, and exposure to animal and insect vectors for disease spread. In Iowa, public health officials are particularly concerned with the quality of their drinking water, recreational waters, indoor and outdoor air quality, lead poisoning, safe housing, and hazardous and solid waste.

As the global community attempts to provide food, water, and shelter for the world's population, it is important to remain aware of how our actions affect local and global environmental systems. At the same time, public health workers must continue to monitor and attempt to prevent adverse health conditions caused and exacerbated by interactions with the environment.

### ISSUES IN IOWA...

- ✓ Drinking water quality
- ✓ Recreational water quality
- ✓ Indoor and outdoor air quality
- ✓ Lead poisoning
- ✓ Safe housing
- ✓ Hazardous and solid waste

## Childhood Blood Lead Poisoning

Childhood lead poisoning has significant effects on the health of children and on community health. Lead has adverse effects on nearly all organ systems in the body. It is especially harmful to the developing brains and nervous systems of children under the age of six years. At very high blood lead levels, children can suffer severe brain damage or even die. At blood lead levels as low as 10 micrograms per deciliter ( $\mu\text{g/dL}$ ), a child's intelligence, hearing, and growth are affected. In a community, the presence of lead-poisoned children can be associated with an increase in the number of children with developmental deficits and learning disorders. This places an unnecessary and expensive burden on the educational system. The presence of lead-poisoned children also requires substantial community public health resources for medical and environmental case management services.

*High blood lead levels have adverse effects on nearly all organ systems in the body, and are especially harmful to children.*

Most cases of childhood lead poisoning are caused by lead-based paint, which is found in most homes built before 1960. Young children who live in pre-1960 homes become lead-poisoned when they put paint chips or exterior soil in their mouths or when they get house dust and soil on their hands and put their hands in their mouths.

Although lead poisoning can cause serious health problems – including death – most lead-poisoned children demonstrate no visible symptoms. This makes it much more important to have an effective program to prevent childhood lead poisoning.

*Most cases of childhood lead poisoning are caused by lead-based paints found in homes built before 1960.*

Since 1992, the Iowa Department of Public Health (IDPH) has recommended that all children in Iowa under the age of six years be tested for lead poisoning. In addition, state and federal laws require that all children under the age of six and covered by Medicaid be tested for lead poisoning. Finally, all Iowa children must now receive at least one blood lead test before the age of mandatory school attendance.

In Iowa, blood lead testing is conducted by the Title V Child's Health Program, local health departments, and by many private physicians. The IDPH childhood blood lead level surveillance system tracks all testing in the state. Thus, blood lead testing results collected as required by Medicaid, as well as those collected from voluntary testing of non-Medicaid children are reported to IDPH.

In the following tables, data are presented for children who were born in calendar year 2003 and 2004 and who received at least one blood lead test before their sixth birthday. Children followed for blood lead poisoning may be tested multiple times. The test results that are presented in the following tables reflect the highest blood lead level for any particular child.

For each county, the number of children receiving a blood lead test who were identified with blood levels greater than or equal to 10 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ). A blood level of 10  $\mu\text{g}/\text{dL}$  has been identified by the Centers for Disease Control and Prevention as the threshold for lead poisoning in children and is categorized as “high” for the graphs. Additional data, such as the percent of children in each birth cohort who were tested for lead poisoning, are also presented.

*For Iowa children born in 2003-2004, 96.2 percent were tested for lead poisoning, and 3.9 percent of these children had blood lead levels greater than or equal to 10  $\mu\text{g}/\text{dL}$ .*

Of the children born in Iowa in 2003-2004, 96.2 percent received at least one blood test before their sixth birthday (range by county: 73 to 100 percent), and 3.9 percent of these children had blood levels greater than or equal to 10  $\mu\text{g}/\text{dL}$  (range by county: 0.8 to 13.8 percent).

# Percent of Children Tested for Blood Lead Poisoning, 2003-2004<sup>1</sup>

	County	2003	2004	County	2003	2004
Counties with Average Population < 10,000	Adair	87.7%	100.0%	Lucas	93.1%	100.0%
	Adams	100.0%	100.0%	Monona	100.0%	100.0%
	Audubon	92.9%	100.0%	Monroe	91.5%	100.0%
	Clarke	100.0%	100.0%	Osceola	90.1%	80.0%
	Davis	70.8%	85.6%	Palo Alto	86.1%	100.0%
	Decatur	83.2%	94.2%	Pocahontas	100.0%	89.2%
	Fremont	100.0%	100.0%	Ringgold	79.4%	84.2%
	Greene	100.0%	100.0%	Taylor	100.0%	100.0%
	Howard	81.0%	95.0%	Van Buren	64.4%	83.0%
	Humboldt	100.0%	84.6%	Wayne	100.0%	100.0%
	Ida	100.0%	77.5%	Worth	100.0%	100.0%
				<b>County Grp %</b>	91.2%	93.9%
Counties with Average Population 10,000 – 20,000	Allamakee	100.0%	100.0%	Hardin	100.0%	100.0%
	Appanoose	79.1%	87.6%	Iowa	100.0%	100.0%
	Buena Vista	100.0%	100.0%	Jefferson	87.8%	93.4%
	Butler	100.0%	88.3%	Keokuk	71.9%	87.2%
	Calhoun	100.0%	100.0%	Kossuth	100.0%	100.0%
	Cass	100.0%	100.0%	Louisa	100.0%	95.7%
	Cedar	100.0%	100.0%	Lyon	70.7%	75.7%
	Cherokee	100.0%	100.0%	Mitchell	79.0%	73.0%
	Chickasaw	100.0%	100.0%	Montgomery	100.0%	100.0%
	Clay	96.4%	100.0%	O'Brien	100.0%	100.0%
	Clayton	97.7%	98.1%	Page	100.0%	100.0%
	Crawford	100.0%	100.0%	Poweshiek	97.4%	100.0%
	Delaware	73.1%	91.5%	Sac	99.1%	100.0%
	Dickinson	79.9%	100.0%	Shelby	100.0%	100.0%
	Emmet	92.1%	100.0%	Tama	96.7%	100.0%
	Floyd	93.4%	99.5%	Union	100.0%	100.0%
	Franklin	100.0%	100.0%	Winnebago	100.0%	100.0%
	Hamilton	95.0%	93.0%	Wright	100.0%	98.4%
	Hancock	100.0%	100.0%	<b>County Grp %</b>	94.8%	97.1%
Counties with Average Population > 20,000	Boone	100.0%	100.0%	Lee	90.6%	100.0%
	Buchanan	82.6%	87.2%	Mahaska	100.0%	100.0%
	Carroll	96.6%	100.0%	Marion	100.0%	100.0%
	Cerro Gordo	100.0%	100.0%	Marshall	100.0%	100.0%
	Clinton	100.0%	100.0%	Muscatine	94.9%	100.0%
	Des Moines	100.0%	100.0%	Plymouth	98.7%	100.0%
	Fayette	93.8%	100.0%	Sioux	96.5%	100.0%
	Henry	100.0%	100.0%	Wapello	100.0%	100.0%
	Jackson	100.0%	100.0%	Webster	100.0%	100.0%
	Jasper	87.2%	95.5%	Winneshiek	100.0%	100.0%
				<b>County Grp %</b>	97.1%	99.3%
MSA Counties	Benton	97.3%	100.0%	Linn	92.7%	97.5%
	Black Hawk	100.0%	100.0%	Madison	92.3%	98.0%
	Bremer	100.0%	100.0%	Mills	99.4%	88.5%
	Dallas	100.0%	100.0%	Polk	99.0%	100.0%
	Dubuque	83.8%	93.3%	Pottawattamie	80.0%	79.2%
	Grundy	93.2%	100.0%	Scott	96.3%	99.4%
	Guthrie	100.0%	100.0%	Story	99.3%	100.0%
	Harrison	80.1%	92.6%	Warren	100.0%	100.0%
	Johnson	88.4%	98.3%	Washington	88.3%	84.5%
	Jones	100.0%	99.1%	Woodbury	91.4%	100.0%
				<b>County Grp %</b>	94.6%	97.7%
<b>State %</b>		94.9%	97.7%			

<sup>1</sup> Children born in years 2001, 2002

Source: Iowa Department of Public Health, Bureau of Lead Poisoning Prevention



# Elevated Levels of Blood Lead: Children Born in 2003<sup>1</sup>

	County	# Born	# Tested	≥ 10 µg/dL	Total % High	County	# Born	# Tested	≥ 10 µg/dL	Total % High
Counties with Average Population < 10,000	Adair	81	71	0	0.0%	Lucas	101	94	11	11.7%
	Adams	40	40	1	2.5%	Monona	93	93	13	14.0%
	Audubon	70	65	9	13.8%	Monroe	94	86	1	1.2%
	Clarke	135	135	7	5.2%	Osceola	81	73	2	2.7%
	Davis	130	92	1	1.1%	Palo Alto	115	99	3	3.0%
	Decatur	95	79	8	10.1%	Pocahontas	63	63	4	6.3%
	Fremont	93	93	0	0.0%	Ringgold	63	50	5	10.0%
	Greene	110	110	8	7.3%	Taylor	62	62	5	8.1%
	Howard	100	81	1	1.2%	Van Buren	87	56	1	1.8%
	Humboldt	107	107	2	1.9%	Wayne	73	73	11	15.1%
	Ida	72	72	10	13.9%	Worth	86	86	2	2.3%
						<b>Total</b>	1,951	1,780	105	5.9%
Counties with Average Population 10,000 – 20,000	Allamakee	170	170	9	5.3%	Hardin	213	213	16	7.5%
	Appanoose	182	144	5	3.5%	Iowa	197	197	10	5.1%
	Buena Vista	251	251	7	2.8%	Jefferson	148	130	4	3.1%
	Butler	157	157	4	2.5%	Keokuk	128	92	3	3.3%
	Calhoun	86	86	4	4.7%	Kossuth	161	161	2	1.2%
	Cass	152	152	8	5.3%	Louisa	140	140	8	5.7%
	Cedar	204	204	4	2.0%	Lyon	164	116	6	5.2%
	Cherokee	115	115	7	6.1%	Mitchell	119	94	3	3.2%
	Chickasaw	150	150	6	4.0%	Montgomery	115	115	10	8.7%
	Clay	223	215	5	2.3%	O'Brien	158	158	8	5.1%
	Clayton	214	209	10	4.8%	Page	166	166	19	11.4%
	Crawford	239	239	17	7.1%	Poweshiek	193	188	9	4.8%
	Delaware	216	158	6	3.8%	Sac	112	111	9	8.1%
	Dickinson	164	131	2	1.5%	Shelby	123	123	3	2.4%
	Emmet	151	139	2	1.4%	Tama	239	231	17	7.4%
	Floyd	182	170	5	2.9%	Union	144	144	13	9.0%
	Franklin	121	121	9	7.4%	Winnebago	108	108	3	2.8%
	Hamilton	181	172	10	5.8%	Wright	180	180	14	7.8%
	Hancock	107	107	3	2.8%	<b>Total</b>	6,073	5,757	280	4.9%
Counties with Average Population > 20,000	Boone	320	320	18	5.6%	Lee	393	356	19	5.3%
	Buchanan	298	246	9	3.7%	Mahaska	280	280	17	6.1%
	Carroll	266	257	12	4.7%	Marion	392	392	7	1.8%
	Cerro Gordo	493	493	27	5.5%	Marshall	572	572	58	10.1%
	Clinton	529	529	30	5.7%	Muscatine	613	582	18	3.1%
	Des Moines	496	496	38	7.7%	Plymouth	306	302	11	3.6%
	Fayette	243	228	10	4.4%	Sioux	459	443	14	3.2%
	Henry	194	194	18	9.3%	Wapello	495	495	33	6.7%
	Jackson	220	220	14	6.4%	Webster	477	477	23	4.8%
	Jasper	439	383	10	2.6%	Winnesiek	180	180	4	2.2%
						<b>Total</b>	7,665	7,445	390	5.2%
MSA Counties	Benton	333	324	19	5.9%	Linn	2,754	2,553	71	2.8%
	Black Hawk	1,547	1,547	85	5.5%	Madison	194	179	7	3.9%
	Bremer	242	242	4	1.7%	Mills	169	168	5	3.0%
	Dallas	593	593	16	2.7%	Polk	6,371	6,310	145	2.3%
	Dubuque	1,231	1,032	38	3.7%	Pottawattamie	1,257	1,005	9	0.9%
	Grundy	117	109	2	1.8%	Scott	2,233	2,150	97	4.5%
	Guthrie	151	151	5	3.3%	Story	912	906	19	2.1%
	Harrison	176	141	3	2.1%	Warren	496	496	5	1.0%
	Johnson	1,514	1,339	22	1.6%	Washington	315	278	11	4.0%
	Jones	221	221	10	4.5%	Woodbury	1,624	1,484	86	5.8%
						<b>Total</b>	22,450	21,228	659	3.1%
	<b>State Total</b>	38,139	36,210	1,434	4.0%					

<sup>1</sup>Children tested before six years of age

Source: Iowa Department of Public Health Bureau of Lead Poisoning Prevention

# Elevated Levels of Blood Lead: Children Born in 2004<sup>1</sup>

	County	# Born	# Tested	≥ 10 µg/dL	Total % High	County	# Born	# Tested	≥ 10 µg/dL	Total % High
Counties with Average Population < 10,000	Adair	60	60	1	1.7%	Lucas	89	89	9	10.1%
	Adams	38	38	2	5.3%	Monona	103	103	14	13.6%
	Audubon	46	46	3	6.5%	Monroe	82	82	2	2.4%
	Clarke	124	124	4	3.2%	Osceola	80	64	2	3.1%
	Davis	118	101	2	2.0%	Palo Alto	105	105	6	5.7%
	Decatur	103	97	4	4.1%	Pocahontas	74	66	0	0.0%
	Fremont	74	74	1	1.4%	Ringgold	57	48	1	2.1%
	Greene	100	100	6	6.0%	Taylor	68	68	10	14.7%
	Howard	119	113	6	5.3%	Van Buren	88	73	5	6.8%
	Humboldt	143	121	4	3.3%	Wayne	81	81	5	6.2%
	Ida	80	62	6	9.7%	Worth	74	74	7	9.5%
						<b>Total</b>	1,906	1,789	100	5.6%
Counties with Average Population 10,000 – 20,000	Allamakee	205	205	11	5.4%	Hardin	200	200	15	7.5%
	Appanoose	145	127	4	3.1%	Iowa	190	190	9	4.7%
	Buena Vista	268	268	16	6.0%	Jefferson	152	142	7	4.9%
	Butler	179	158	6	3.8%	Keokuk	133	116	10	8.6%
	Calhoun	115	115	5	4.3%	Kossuth	175	175	2	1.1%
	Cass	151	151	2	1.3%	Louisa	164	157	10	6.4%
	Cedar	205	205	8	3.9%	Lyon	144	109	4	3.7%
	Cherokee	113	113	8	7.1%	Mitchell	111	81	5	6.2%
	Chickasaw	131	131	7	5.3%	Montgomery	125	125	9	7.2%
	Clay	209	209	4	1.9%	O'Brien	171	171	10	5.8%
	Clayton	207	203	8	3.9%	Page	168	168	11	6.5%
	Crawford	244	244	7	2.9%	Poweshiek	183	183	10	5.5%
	Delaware	189	173	6	3.5%	Sac	123	123	7	5.7%
	Dickinson	178	178	0	0.0%	Shelby	115	115	2	1.7%
	Emmet	129	129	5	3.9%	Tama	237	237	12	5.1%
	Floyd	197	196	9	4.6%	Union	143	143	17	11.9%
	Franklin	133	133	12	9.0%	Winnebago	101	101	4	4.0%
	Hamilton	201	187	9	4.8%	Wright	186	183	5	2.7%
	Hancock	117	117	4	3.4%	<b>Total</b>	6,137	5,961	280	4.7%
Counties with Average Population > 20,000	Boone	287	287	13	4.5%	Lee	385	385	16	4.2%
	Buchanan	290	253	14	5.5%	Mahaska	268	268	17	6.3%
	Carroll	260	260	13	5.0%	Marion	398	398	6	1.5%
	Cerro Gordo	500	500	26	5.2%	Marshall	642	642	45	7.0%
	Clinton	599	599	27	4.5%	Muscatine	587	587	22	3.7%
	Des Moines	523	523	47	9.0%	Plymouth	324	324	10	3.1%
	Fayette	209	209	9	4.3%	Sioux	464	464	20	4.3%
	Henry	255	255	17	6.7%	Wapello	476	476	33	6.9%
	Jackson	193	193	9	4.7%	Webster	491	491	15	3.1%
	Jasper	421	402	17	4.2%	Winneshek	186	186	5	2.7%
						<b>Total</b>	7,758	7,702	381	4.9%
MSA Counties	Benton	315	315	8	2.5%	Linn	2,760	2,691	83	3.1%
	Black Hawk	1,715	1,715	84	4.9%	Madison	196	192	1	0.5%
	Bremer	232	232	7	3.0%	Mills	183	162	2	1.2%
	Dallas	655	655	21	3.2%	Polk	6,320	6,320	108	1.7%
	Dubuque	1,203	1,123	28	2.5%	Pottawattamie	1,221	967	17	1.8%
	Grundy	112	112	2	1.8%	Scott	2,292	2,278	103	4.5%
	Guthrie	106	106	3	2.8%	Story	902	902	23	2.5%
	Harrison	136	126	6	4.8%	Warren	507	507	7	1.4%
	Johnson	1,558	1,531	14	0.9%	Washington	290	245	12	4.9%
	Jones	219	217	9	4.1%	Woodbury	1,634	1,634	106	6.5%
						<b>Total</b>	22,556	22,030	644	2.9%
<b>State Total</b>		38,357	37,482	1,405	3.7%					

<sup>1</sup>Children tested before six years of age

Source: Iowa Department of Public Health Bureau of Lead Poisoning Prevention

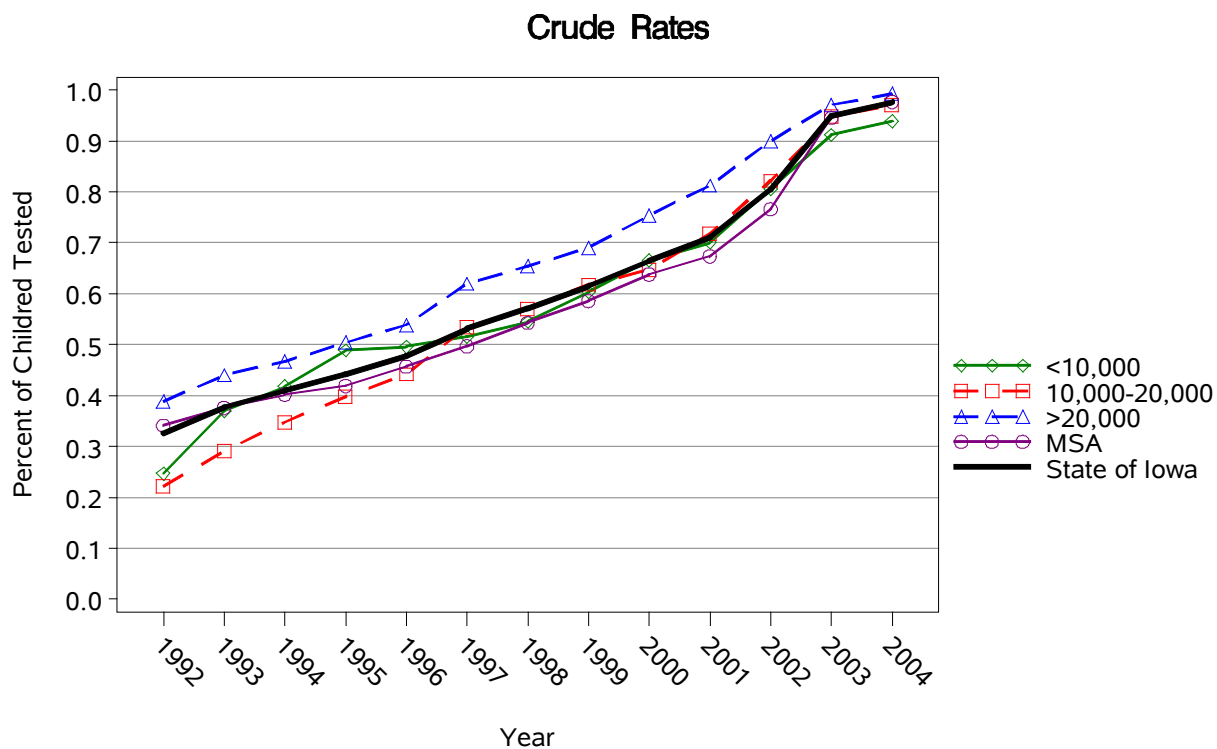
# Elevated Levels of Blood Lead: Children Born in 2003-2004<sup>1</sup>

	County	Number Tested	% with High Levels	County	Number Tested	% with High Levels
Counties with Average Population < 10,000	Adair	131	0.8%	Lucas	183	10.9%
	Adams	78	3.8%	Monona	196	13.8%
	Audubon	111	10.8%	Monroe	168	1.8%
	Clarke	259	4.2%	Osceola	137	2.9%
	Davis	193	1.6%	Palo Alto	204	4.4%
	Decatur	176	6.8%	Pocahontas	129	3.1%
	Fremont	167	0.6%	Ringgold	98	6.1%
	Greene	210	6.7%	Taylor	130	11.5%
	Howard	194	3.6%	Van Buren	129	4.7%
	Humboldt	228	2.6%	Wayne	154	10.4%
	Ida	134	11.9%	Worth	160	5.6%
				<b>Total</b>	3,569	5.7%
Counties with Average Population 10,000 – 20,000	Allamakee	375	5.3%	Hardin	413	7.5%
	Appanoose	271	3.3%	Iowa	387	4.9%
	Buena Vista	519	4.4%	Jefferson	272	4.0%
	Butler	315	3.2%	Keokuk	208	6.3%
	Calhoun	201	4.5%	Kossuth	336	1.2%
	Cass	303	3.3%	Louisa	297	6.1%
	Cedar	409	2.9%	Lyon	225	4.4%
	Cherokee	228	6.6%	Mitchell	175	4.6%
	Chickasaw	281	4.6%	Montgomery	240	7.9%
	Clay	424	2.1%	O'Brien	329	5.5%
	Clayton	412	4.4%	Page	334	9.0%
	Crawford	483	5.0%	Poweshiek	371	5.1%
	Delaware	331	3.6%	Sac	234	6.8%
	Dickinson	309	0.6%	Shelby	238	2.1%
	Emmet	268	2.6%	Tama	468	6.2%
	Floyd	366	3.8%	Union	287	10.5%
	Franklin	254	8.3%	Winnebago	209	3.3%
	Hamilton	359	5.3%	Wright	363	5.2%
	Hancock	224	3.1%	<b>Total</b>	11,718	4.8%
Counties with Average Population > 20,000	Boone	607	5.1%	Lee	741	4.7%
	Buchanan	499	4.6%	Mahaska	548	6.2%
	Carroll	517	4.8%	Marion	790	1.6%
	Cerro Gordo	993	5.3%	Marshall	1,214	8.5%
	Clinton	1,128	5.1%	Muscatine	1,169	3.4%
	Des Moines	1,019	8.3%	Plymouth	626	3.4%
	Fayette	437	4.3%	Sioux	907	3.7%
	Henry	449	7.8%	Wapello	971	6.8%
	Jackson	413	5.6%	Webster	968	3.9%
	Jasper	785	3.4%	Winneshiek	366	2.5%
				<b>Total</b>	15,147	5.1%
MSA Counties	Benton	639	4.2%	Linn	5,244	2.9%
	Black Hawk	3,262	5.2%	Madison	371	2.2%
	Bremer	474	2.3%	Mills	330	2.1%
	Dallas	1,248	3.0%	Polk	12,630	2.0%
	Dubuque	2,155	3.1%	Pottawattamie	1,972	1.3%
	Grundy	221	1.8%	Scott	4,428	4.5%
	Guthrie	257	3.1%	Story	1,808	2.3%
	Harrison	267	3.4%	Warren	1,003	1.2%
	Johnson	2,870	1.3%	Washington	523	4.4%
	Jones	438	4.3%	Woodbury	3,118	6.2%
				<b>Total</b>	43,258	3.0%
<b>State Total</b>		73,692	3.9%			

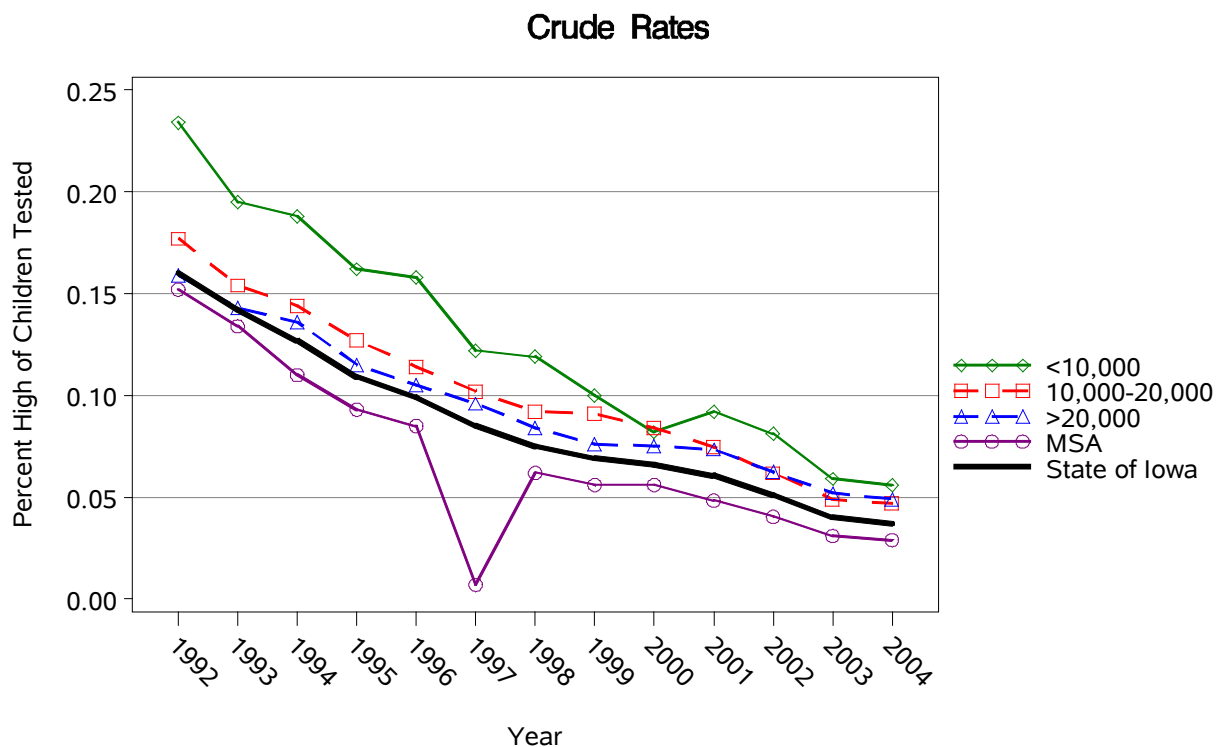
<sup>1</sup>Children tested before six years of age

Source: Iowa Department of Public Health, Bureau of Lead Poisoning Prevention

## Tested for Blood Lead: Children Born in 1992-2004



## Elevated Levels of Blood Lead: Children Born in 1992-2004



## US Department of Health and Human Services – Agency for Healthcare Research and Quality



The Agency for Healthcare Research and Quality is a national research organization which is part of the U.S. Department of Health and Human Services. AHRQ funds internal and external research projects, and has a large variety of public health data available on its website, <http://www.ahrq.gov/>. The organization periodically releases summary reports of health care quality across states and regions as part of its mission to *“improve the quality, safety, efficiency, and effectiveness of health care for all Americans.”*

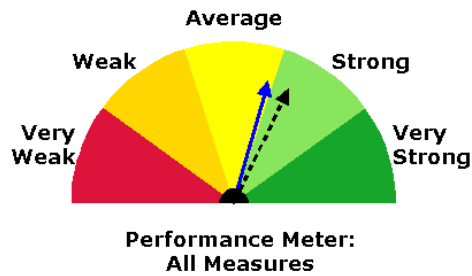
Known as “State Snapshots” and using data from the National Healthcare Quality Report, these reports make comparisons of health care quality measures across states and regions. The measurements on which these aggregate statistics are based are further broken down and compared to previous data. A sample of the summary measures from the 2010 and 2009 report is presented here, depending on the most recent data availability. More detailed information can be found at:

**2010 Report:** <http://statesnapshots.ahrq.gov/snaps10/>

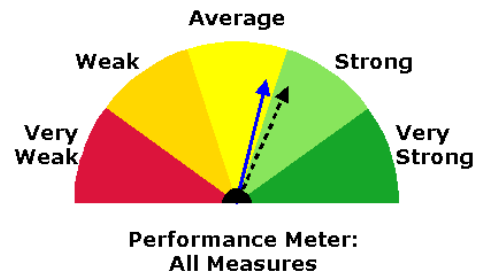
**2009 Report:** <http://statesnapshots.ahrq.gov/snaps09/>

## 2010/2009 State Snapshots – Executive Summary

### All-State Comparison (All Measures)



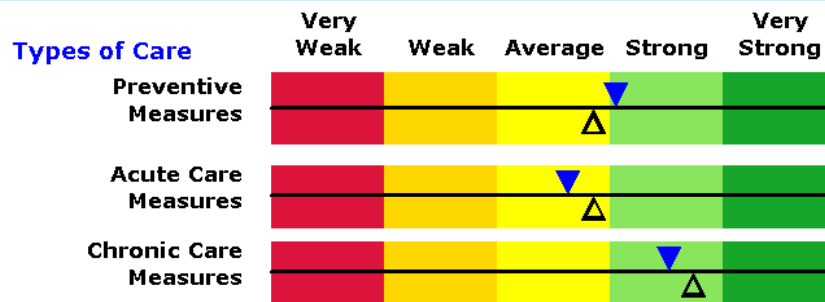
### Regional Comparison (All Measures)



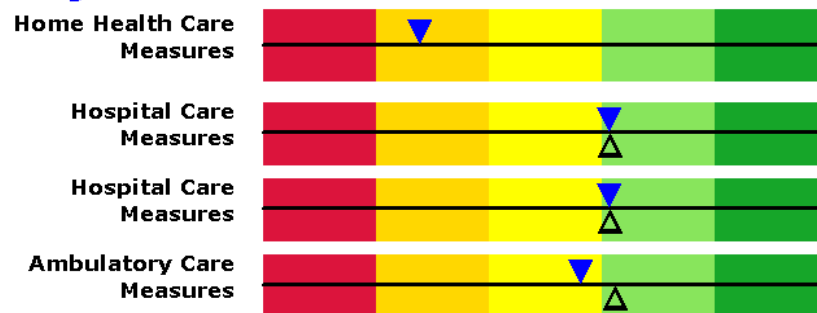
— = Most Recent Data Year  
--- = Baseline Year

(Baseline year may vary across measures)

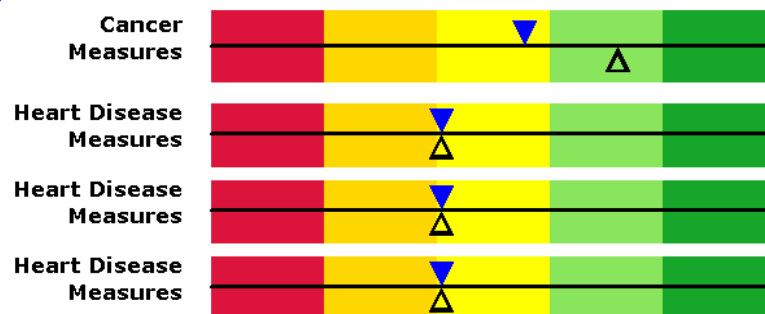
### Health Care Quality by Measure Type – Compared to All States:



#### Settings of Care



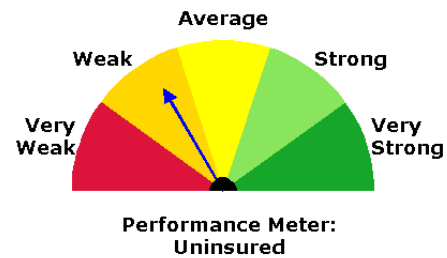
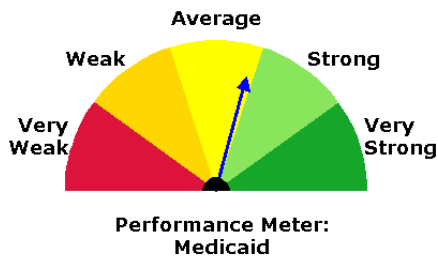
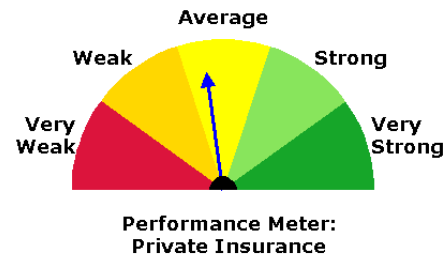
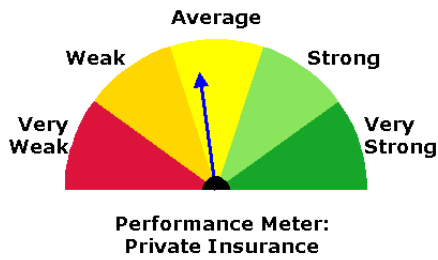
#### Care by Clinical Area



▼ Most Recent Data Year  
▲ Baseline Year

Source: Agency for Healthcare Research and Quality

## Quality of Care Ratings by Payer – All State Comparison



## Strongest Measures

- Percentage of long-stay nursing home residents who spend most of their time in bed or in a chair (lower is better)
- Percentage of long-stay nursing home residents who lose too much weight (lower is better)
- Percentage of short-stay nursing home residents with pressure sores (lower is better)
- Percentage of family caregivers who did not want more information about what to expect while the patient was dying (higher is better)
- Deaths per 1,000 adult admissions with abdominal aortic aneurysm (AAA) repair (excluding obstetric admissions and transfers to another hospital) (lower is better)

## Weakest Measures

- Admissions with perforated appendix per 1,000 adult admissions with appendicitis (excluding obstetric admissions and transfers from other institutions) (lower is better)
- Percentage of short-stay nursing home residents with delirium (lower is better) (lower is better)
- Percentage of home health care patients who have less urinary incontinence (higher is better)
- Percentage of home health care patients who need urgent, unplanned medical care (lower is better)
- Admissions with perforated appendix per 1,000 admissions, ages 1-17, with appendicitis (excluding transfers from other institutions, obstetric admissions, normal newborns, and neonates) (lower is better)

Source: Agency for Healthcare Research and Quality





## **Appendix I: Data Sources**

## Public Health Information Websites

National	
Agency for Healthcare Research and Quality	<a href="http://www.ahrq.gov/">http://www.ahrq.gov/</a>
Centers for Disease Control and Prevention	<a href="http://www.cdc.gov/">http://www.cdc.gov/</a>
Healthy People	<a href="http://www.healthypeople.gov/">http://www.healthypeople.gov/</a>
National Center for Health Statistics	<a href="http://www.cdc.gov/nchs/">http://www.cdc.gov/nchs/</a>
National Institutes of Health	<a href="http://www.nih.gov/">http://www.nih.gov/</a>
US Census Bureau	<a href="http://www.census.gov/">http://www.census.gov/</a>
US Department of Health and Human Services	<a href="http://www.hhs.gov/">http://www.hhs.gov/</a>
Surveillance, Epidemiology and End Results Program	<a href="http://www.seer.cancer.gov/">http://www.seer.cancer.gov/</a>
Iowa	
Iowa Department of Education	<a href="http://educateiowa.gov/">http://educateiowa.gov/</a>
Iowa Department of Human Services	<a href="http://www.dhs.state.ia.us/">http://www.dhs.state.ia.us/</a>
Iowa Department of Public Health	<a href="http://www.idph.state.ia.us/">http://www.idph.state.ia.us/</a>
Iowa Kids Count	<a href="http://datacenter.kidscount.org/data/bystate/StateLanding.aspx?state=IA">http://datacenter.kidscount.org/data/bystate/StateLanding.aspx?state=IA</a>
State Health Registry of Iowa	<a href="http://www.public-health.uiowa.edu/shri/">http://www.public-health.uiowa.edu/shri/</a>
University of Iowa College of Public Health	<a href="http://www.public-health.uiowa.edu/">http://www.public-health.uiowa.edu/</a>

Fact Book Item	Data Source
<b>State Snapshot (AHRQ)</b>	
State Snapshot 2010/2011 Reports	Agency for Healthcare Research and Quality Website: <a href="http://www.ahrq.gov/">http://www.ahrq.gov/</a> Reports: <a href="http://statesnapshots.ahrq.gov/snaps09/">http://statesnapshots.ahrq.gov/snaps09/</a> <a href="http://statesnapshots.ahrq.gov/snaps10/">http://statesnapshots.ahrq.gov/snaps10/</a>
<b>Demographics</b>	
State Population Age Distributions for 2004-2008	Surveillance, Epidemiology, and End Results (SEER) Program SEER*Stat Database, National Cancer Institute, DCCPS, Surveillance Research Program, Cancer Statistics Branch, released April 2007. Website: <a href="http://seer.cancer.gov/seerstat/">http://seer.cancer.gov/seerstat/</a>
State Population Distributions for 1970-2009	US Census Bureau Website: <a href="http://www.census.gov">http://www.census.gov</a>
<b>Social Determinants of Health</b>	
High School Graduation	Iowa Department of Education, Bureau of Planning, Research, Development, and Evaluation, Project EASIER Website: <a href="http://educateiowa.gov/">http://educateiowa.gov/</a>
Poverty Levels	U.S. Census Bureau, Small Area Income & Poverty Estimates Website: <a href="http://www.census.gov/did/www/saie/">http://www.census.gov/did/www/saie/</a>
Uninsured	U.S. Census Bureau, Small Area Health Insurance Estimates Website: <a href="http://www.census.gov/did/www/sahie/">http://www.census.gov/did/www/sahie/</a>
<b>Health Behaviors</b>	
Behavioral Risk Factor Surveillance System (BRFSS)	Centers for Disease Control & Prevention Website: <a href="http://www.cdc.gov/brfss/">http://www.cdc.gov/brfss/</a>
Iowa Youth Survey (IYS)	Iowa Department of Public Health, Division of Health Promotion, Prevention, and Addictive Behaviors Website: <a href="http://www.state.ia.us/dhr/iys/">http://www.state.ia.us/dhr/iys/</a>
Substance Abuse Treatment	Iowa Consortium for Substance Abuse Research
Marriages	Iowa Department of Public Health Vital Statistics
Dissolutions	Website: <a href="http://www.idph.state.ia.us/apl/health_statistics.asp">http://www.idph.state.ia.us/apl/health_statistics.asp</a>

## Prenatal and Infant Health

Live Births	Iowa Department of Public Health, Vital Statistics, Birth Certificates Website: <a href="http://www.idph.state.ia.us/apl/health_statistics.asp">http://www.idph.state.ia.us/apl/health_statistics.asp</a>
Out-Of-Wedlock Births	
Mothers Under Age 20	
Low Birth Weight	
Mothers Who Began Prenatal Care in the First Trimester	
Mothers Who Smoked During Pregnancy	Iowa Department of Public Health, Vital Statistics, Death Certificates Website: <a href="http://www.idph.state.ia.us/apl/health_statistics.asp">http://www.idph.state.ia.us/apl/health_statistics.asp</a>
Mothers Who Drank During Pregnancy	
Fetal Deaths	
Neonatal Deaths	
Perinatal Deaths	
Infant Deaths	Iowa Center for Congenital and Inherited Disorders, The University of Iowa Website: <a href="http://www.idph.state.ia.us/genetics/default.asp">http://www.idph.state.ia.us/genetics/default.asp</a>
Birth Defects	
Selected Birth Defects in Iowa	

## Infectious Diseases

Sexually Transmitted Diseases	Bureau of Disease Prevention and Immunization via Iowa Department of Public Health
Infectious Diseases	Bureau of Infectious Diseases via Iowa Department of Public Health

## Cancer Incidence and Mortality

All Sites of Cancer	<i>All cancer incidence data from:</i>
Prostate	The University of Iowa, State Health Registry of Iowa via NCI's SEER*Stat Program, version 7.0.4 Website: <a href="http://seer.cancer.gov/seerstat/">http://seer.cancer.gov/seerstat/</a>
Lung	
Female Breast	
Colorectum	
Non-Hodgkin's Lymphoma	<i>All cancer mortality data from:</i>
Leukemia	"Cause of Death" codes on death certificates filed with Vital Records, Iowa Department of Public Health via NCHS and NCI's SEER*Stat Program, version 7.0.4. supplemented by SEER*Prep for 2008 Iowa mortality data.
Skin Melanoma	
Oral Cavity (Excluding Lip)	
Cervical	

**Injury Mortality**

All Transportation  
 Motor Vehicle Traffic  
 Suicide  
 Firearms  
 Falls  
 Homicide  
 Poisoning  
 Burns  
 Drowning  
 All Other Unintentional

“Cause of Death” codes on death certificates filed with Vital Records, Iowa Department of Public Health. Analyses conducted by The University of Iowa, State Health Registry of Iowa.

**Youth Injury Mortality**

All Transportation Ages 0-14  
 All Transportation Ages 15-19  
 Motor Vehicle Traffic Ages 0-14  
 Motor Vehicle Traffic Ages 15-19  
 Suicide Ages 0-14  
 Suicide Ages 15-19  
 Homicide Ages 0-14  
 Homicide Ages 15-19

“Cause of Death” codes on death certificates filed with Vital Records, Iowa Department of Public Health. Analyses conducted by the University of Iowa, State Health Registry of Iowa.

**Other Mortality**

All Causes  
 Heart Disease  
 Stroke  
 Chronic Obstructive Pulmonary Disease  
 Accidents and Adverse Effects  
 Alzheimer’s  
 Pneumonia/Influenza  
 Diabetes Mellitus  
 Infectious/Parasitic  
 Nephritis, Nephrotic Syndrome, Nephrosis  
 Atherosclerosis  
 Chronic Liver Disease and Cirrhosis  
 Congenital Anomalies  
 Conditions Originating in the Perinatal Period

“Cause of Death” codes on death certificates filed with Vital Records, Iowa Department of Public Health via NCHS and NCI’s SEER\*Stat Program, version 7.0.4 supplemented by SEER\*Prep for 2008 Iowa mortality data.

## Health Care Providers

Total Physicians	Office of Statewide Clinical Education Programs (OSCEP), College of Medicine, The University of Iowa
Primary Care Physicians	
Family Practice Physicians	
Internal Medicine Physicians	
Pediatric Physicians	
Obstetrics/Gynecology Physicians	
General Surgeons	
Other Specialty Physicians	
Physician Assistants	
Advanced Practice Nurses	
Pharmacists	Bureau of Emergency Medical Services Iowa Department of Public Health Website: <a href="http://www.idph.state.ia.us/ems/">http://www.idph.state.ia.us/ems/</a>
Dentists	
Emergency Care Providers: Total	
First Responders	
Emergency Medical Technicians: Basic	
Emergency Medical Technicians: Intermediate	
Emergency Medical Technicians: Paramedic	
Emergency Medical Technicians: Paramedic Specialist	

## Health Care Facilities

Hospitals	Department of Inspections and Appeals Website
Hospital Beds	<a href="https://dia-hfd.iowa.gov/DIA_HFD/Home.do">https://dia-hfd.iowa.gov/DIA_HFD/Home.do</a>
Nursing Facilities	
Nursing Facility Beds	
Chronic Confusion or Dementing Illness Units	
Chronic Confusion or Dementing Illness Beds	
Intermediate Care Facilities for the Mentally Retarded	
Intermediate Care Facilities for the Mentally Retarded Beds	
Residential Care Facilities	
Residential Care Facilities Beds	
Residential Care Facilities for Persons with Mental Illness	
Residential Care Facilities for Persons with Mental Illness Beds	
Residential Care Facilities for the Mentally Retarded	
Residential Care Facilities for the Mentally Retarded Beds	
3 to 5 Bed Units for the Mentally Retarded	
3 to 5 Bed Units for the Mentally Retarded Beds	
Psychiatric Medical Institutions for Children	
Psychiatric Medical Institutions for Children Beds	
Total Trauma Facilities	Bureau of Emergency Medical Services
Community Trauma Care Facilities	Iowa Department of Public Health
Area Trauma Care Facilities	Website: <a href="http://www.idph.state.ia.us/ems/">http://www.idph.state.ia.us/ems/</a>
Regional Trauma Care Facilities	
Resource Trauma Care Facilities	

## Environmental Indicators

Childhood Lead Poisoning	Bureau of Lead Poisoning Prevention Iowa Department of Public Health
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## **Appendix II: Glossary of Terms**

## Glossary of Terms

**Age-Adjusted Rate (Direct Method):** A weighted average of the age-specific incidence or mortality rates from the targeted population(s) where the weights are the proportions of persons in the corresponding age groups of a standard population. In this document, the Year 2000 U.S. population is used as the standard population. Calculating an age-adjusted rate allows for comparisons across targeted populations after accounting or “adjusting” for possible differences in the age-distribution of these populations.

**Area Trauma Care Facility:** Provides initial evaluation and stabilization, including surgical intervention for the severely injured patient. An area trauma care facility provides comprehensive inpatient services to patients who can be maintained in a stable or improving condition without specialized care. Critically injured patients who require specialized care are transferred to a resource or regional trauma care facility. An organized trauma team including a general surgeon, emergency physician, CRNA and/or anesthesiologist, nursing and ancillary personnel are promptly available to meet the patient upon arrival at the emergency department. The general surgeon, emergency physician, and ancillary personnel may be on-call from outside the hospital but with a clear commitment to meet a patient upon arrival at the emergency department when give timely notice by out-of-hospital EMS providers. Some area trauma care facilities elect to provide in-house 24-hour emergency physician coverage. In addition to direct patient care, area trauma care facilities provide community and outreach education and injury prevention programs.

**Chronic Confusion or Dementing Illness Units:** “Chronic Confusion or Dementing Illness” is a special license classification for nursing facilities or a special unit within such a facility providing care to persons who suffer from chronic confusion or dementing illness. Reference to Chronic Confusion of Dementing Illness Units is made in the acts and joint resolutions of the 1990 regular session of the Seventy-Third General Assembly of the State of Iowa.

**Community Trauma Care Facility:** Provides initial evaluation and stabilization of the severely injured patient. Stabilization may include surgical intervention. Most patients needing surgical intervention and/or specialty care are transferred to resource or regional trauma care facilities. Community trauma care facilities have the necessary equipment and diagnostic resources to resuscitate the severely injured patient. An organized team including a physician, nursing and ancillary personnel are promptly available to meet the patient upon arrival at the emergency department if given timely notice by out-of-hospital EMS providers. In addition to patient care, a community trauma care facility provides continuing education and injury prevention programs.

**Confidence Interval:** An interval estimate of a population parameter, often for the mean, calculated from a sample. The width of the interval will increase as the level of confidence increases resulting in a less certain estimate. Narrow confidence intervals indicate a higher level of accuracy.

**Crude Rate:** The number of events or occurrences of disease in a given time period divided by the population at risk for that event or disease over the same time period.

**Emergency Medical Technician – Basic:** The EMT-B course emphasizes the development of student skills in patient assessment and examination; the recognition of signs and symptoms of illness or injury; proper procedures when rendering emergency medical care including patient assisted medications, automated external defibrillation, maintenance of a non-medicated IV, and the use of an advanced airway device. General topics covered include: human anatomy and physiology, bleeding and shock, bandaging and splinting, medical/behavior emergencies, obstetrics/gynecology, extrication from automobiles, farm, industrial and environmental emergencies, and ambulance operations.

**Emergency Medical Technician – Intermediate:** The EMT-I course involves additional training in patient assessment, intravenous therapy, advanced airway management techniques and automated defibrillation.

**Emergency Medical Technician – Paramedic:** This level covers additional emergency medical care skills including cardiac evaluation and treatment, medication effects and treatment, and advanced airway management techniques.

**Emergency Medical Technician – Paramedic Specialist:** This level identifies individuals who have successfully completed a program of training that used, as a minimum, the 1985 EMT-P national standard curriculum (NSC), plus documentation of completion of the objectives to the 1998 EMT-P NSC, or completed the 1998 EMT-P NSC and have successfully completed the department's testing requirements.

**Fetal Death:** A birth that fails to show any sign of life after delivery. Reportable fetal deaths in Iowa are those greater than 20 weeks gestation. The responsibility for determining if a birth meets this definition is that of the attending physician. "Fetal death" and "stillbirth" are synonymous terms.

**First Responder:** The First Responder is trained in patient stabilizing techniques and basic emergency medical care prior to the arrival of an ambulance. Skills in this program include patient assessment, vital signs, automated external defibrillation, oxygen delivery, and use of an advanced airway device.

**Hospital:** Any place which is devoted primarily to the maintenance of facilities for the diagnosis, treatment, or care of two or more non-related individuals suffering from illness, injury, or deformity for a period exceeding 24 hours. It is also a place which is devoted primarily to the rendering of obstetrical or other medical/nursing care for two or more non-related individuals for a period exceeding 24 hours. It can be any institution, place, building or agency in which any accommodation is primarily maintained, furnished or offered for the care of two or more non-related aged or infirmed person requiring or receiving chronic or convalescent care for a period exceeding 24 hours. Hospitals shall include sanitariums or other related institutions within the meaning of the federal Hill-Burton Act. A hospital shall include, in any event, any facilities wholly or partially constructed, or constructed with federal assistance pursuant to Public Law 725, 79th Congress, approved August 13, 1946. Definition is found in Title 42 in the Code of Federal Regulations and 135J of the Iowa Administrative Code.

**Infant Death:** Death of a liveborn infant under one year of age. This includes both neonatal and postneonatal deaths.

**Intermediate Care Facilities for the Mentally Retarded:** Institutions or distinct parts of institutions whose primary purpose is to provide health or rehabilitative services to three or more individuals who primarily have mental retardation or a related condition. Intermediate Care Facilities for the Mentally Retarded must meet the requirements of Iowa Code Chapter 135C and federal standards codified in 42 United States Code 1936d, which is contained in Title 42 of the Code of Federal Regulations, Part 483, Subpart D, 410-480. Definition is found in Chapter 135C of the Code of Iowa.

**Intermediate Care Facilities for Persons with Mental Illness:** Institutions, places, buildings or agencies whose primary purpose is to provide accommodation, board and nursing care for a period exceeding 24 consecutive hours to three or more individuals who primarily have mental illness. Definition is found in Chapter 135C of the Code of Iowa.

**Live Birth:** A birth that shows any sign of life after delivery. The World Health Organization considers a sign of life as being the breathing or showing of any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached. The responsibility for determining if a birth meets this definition is that of the attending physician.

**Margin of Error:** Indicates the accuracy of an estimate and is half the width of a confidence interval. Small margins of error signify more accurate estimates.

**Metropolitan Statistical Area (MSA):** An area with one city of 50,000 or more inhabitants or a Census defined urbanized area and a total metropolitan population of at least 100,000 (75,000 in New England).

**Neonatal Death:** Death of a liveborn infant occurring within the first 27 days of life.

**Nursing Facilities:** Institutions or distinct parts of institutions housing three or more individuals for a period exceeding 24 consecutive hours, whose primary purpose is to provide health-related care and services, including rehabilitation, for individuals who because of mental or physical condition, require nursing care and other services in addition to room and board. Nursing facilities do not engage primarily in providing treatment or care for mental illness or mental retardation. Definition is found in Chapter 135C of the Code of Iowa.

**Perinatal Death:** Death of a fetus of greater than 20 weeks gestation or death of a liveborn infant under 28 days of life.

**Primary Care Physicians:** Includes Family Practice, Internal Medicine, Pediatric, and Obstetrics/Gynecology physicians.

**Public Access Defibrillation:** An EMS provider level for nontraditional providers of emergency medical care who have successfully completed a program that uses a curriculum that meets the approved Iowa objectives regarding Public Access Defibrillation and have successfully completed the department's testing requirements.

**Residential Care Facilities:** Institutions, places, buildings, or agencies providing accommodation, board, personal assistance and other essential daily living activities for a period exceeding 24 consecutive hours. Individuals living in a residential care facility are unable to sufficiently or properly care for themselves because of illness, disease, or physical or mental infirmity, but do not require the services of a registered or licensed practical nurse, except for emergencies. Definition is found in Chapter 135C of the Code of Iowa.

**Residential Care and Specialized 3-5 Bed Facilities for the Mentally Retarded:** Facilities that provide accommodations, board, personal assistance, essential activities of daily living and habilitation services to three or more individuals with mental retardation. Residents of a Residential Care Facility for the Mentally Retarded are unable to sufficiently or properly care for themselves, but do not require the services of a registered or licensed practical nurse. The specialized license is for Residential Care Facilities which serve persons with mental retardation, chronic mental illness and other developmental disabilities having five or fewer residents as specified in Iowa Code Section 225C.26. The facility is exempt from Iowa Code Section 135.63. Definition is found in Chapter 135C of the Code of Iowa.

**Regional Trauma Care Facility:** Provides comprehensive care for the severely injured patient with complex multisystem trauma. An organized trauma team including a general surgeon, emergency physician, anesthesiologist, nursing and ancillary personnel are immediately available to the patient upon arrival at the emergency department. The general surgeon and anesthesiologist are immediately available to the patient upon arrival at the emergency department. The general surgeon and anesthesiologist may take call from outside the hospital, but with a clear commitment to meet the patient upon arrival at the emergency department. A broad range of physician specialists are on-call and promptly available to provide care and/or consultation. In addition to direct patient care, regional trauma care facilities are responsible for community and outreach education and injury prevention.

**Resource Trauma Care Facility:** Provides the most comprehensive care for the severely injured patient with complex multisystem trauma. An organized trauma team including a general surgeon, emergency physician, anesthesiologist, nursing and ancillary personnel are immediately available to the patient upon arrival at the emergency department. Physician specialists may also respond immediately with the trauma team. A broad range of physician specialists are on-call and promptly available to provide care and/or consultation. In addition to direct patient care, resource trauma care facilities are responsible for resident training, research, community and outreach education and injury prevention.



## **Appendix III: Coding and Classifications**

## Cancer Incidence and Mortality

Type of Cancer	Incidence	Mortality	
	ICD-O 3 <sup>1</sup>	ICD-9 <sup>2</sup> (1979-1998)	ICD-10 <sup>3</sup> (1999-Current)
All Sites	C00.0-C80.9	140-208, 238.6	C00-C97
Cervical	C53.0-C53.9	180	C53
Colorectum	C18.0-C18.9, C19.9, C20.9, C26.0	153, 159.0, 154.0-154.1	C18, C26.0, C19-C20
Female Breast	C50.0-C50.9	174-175	C50
Leukemia	M9733, M9742, M9800-M9801, M9805, M9820, M9823 (C42.0, C42.1, C42.4), M9826, M9827, M9831, M9832-M9843, M9835-9837, M9840, M9860, M9861, M9863, M9866, M9867, M9870-M9876, M9891, M9895-M9897, M9910, M9920, M9930, M9931, M9940, M9945, M9946, M9948, M9963, M9964	202.4, 203.1, 204.0-204.2, 204.8-204.9, 205.0-205.3, 205.8-205.9, 206.1-206.2, 206.8-207.2, 207.8, 208.0-208.2, 208.8-208.9	C90.1, C91.0-C91.5, C91.7, C91.9-C92.5, C92.7, C92.9-C93.2, C93.7, C93.9-C94.5, C94.7, C95.0-C95.2, C95.7, C95.9
Lung & Bronchus	C34.0-C34.9	162.2-162.5, 162.8-162.9	C34
Non-Hodgkin's Lymphoma	M9590-M9596, M9670-M9671, M9673, M9675, M9678-M9680, M9689-M9691, M9695, M9698-M9702, M9705, M9708-M9709, M9727-M9729, M9823 (for all sites except C42.0, C42.1, C42.4), M9827 (for all sites except C42.0, C42.1, C42.4)	200, 202.0-202.2, 202.8-202.9	C82-C85, C96.3
Oral Cavity (Excluding Lip)	C01.9-C02.9, C07.9-C08.9, C04.0-C04.9, C03.0-C03.9, C05.0-C05.9, C06.0-C06.9, C11.0-C11.9, C09.0-C09.9, C10.0-C10.9, C12.9, C13.0-C13.9, C14.0, C14.2-C14.8	141-149	C01-C14
Prostate	C61.9	185	C61
Skin Melanoma	C44.0-C44.9	172	C43

<sup>1</sup>International Classification of Diseases for Oncology

<sup>2</sup>International Statistical Classification of Diseases and Related Health Problems, Ninth Revision

<sup>3</sup>International Statistical Classification of Diseases and Related Health Problems, Tenth Revision

\*Source: [http://www.seer.cancer.gov/csr/1975\\_2008/browse\\_csr.php?section=37&page=sect\\_a\\_table.05.html](http://www.seer.cancer.gov/csr/1975_2008/browse_csr.php?section=37&page=sect_a_table.05.html)

\*\*Source: [http://www.seer.cancer.gov/csr/1975\\_2008/browse\\_csr.php?section=37&page=sect\\_a\\_table.08.html](http://www.seer.cancer.gov/csr/1975_2008/browse_csr.php?section=37&page=sect_a_table.08.html)



## Injury Mortality

Injury Mortality Classification	ICD-9 <sup>2</sup> (1979-1998)	ICD-10 <sup>3</sup> (1999-Current)
Unintentional Poisoning	E850-E869	X40-X49
Unintentional Burn	E890-E899, E924	X00-X09, X10-X19
Unintentional Transportation	E800-E848, E929.0, E929.1	V01-V99, Y85
Motored Vehicle Traffic	E810-E819	V02-V04 (.1, .9), V09.2, V12-V14 (.3-.9), V19(.4-.6) V20-V28(.3-.9), V29(.4-.9) V30-V79(.4-.9), V80(.3-.5), V81.1, V82.1, V83-V86(.0-.3), V87(.0-.8), V89.2
Unintentional Drowning	E830, E832, E910	V90, V92, W65-W74
Firearm Mortality	E922, E955.0-E955.4, E965.0-E965.4, E970, E985.0-E985.4	W32-W34, X72-X74, X93-X95, Y35.0, Y22-Y24
Homicide and Legal Intervention Mortality	E960-E969, E970-E978	X85-Y09, Y87.1, Y35, Y89.0
Suicide Mortality	E950-E959	X60-X84, Y87.0
Deaths or Injuries from Falls	E880-E886.9, E888	W00-W19
All Other Unintentional Injury	E849, E870-E879, E887, E889, E900-E909, E911-E921, E923, E925-E928, E929.2-E929.9, E930-E949	W20-W31, W35-W45, W49-W60, W64, W75-W81, W83-W94, W99, X20-X39, X50-X54, X57-X59, Y40-Y66, Y69-Y84, Y86, Y88

<sup>2</sup>International Statistical Classification of Diseases and Related Health Problems, Ninth Revision

<sup>3</sup>International Statistical Classification of Diseases and Related Health Problems, Tenth Revision

## Other Mortality

Mortality Classification	ICD-8 <sup>4</sup> (1968-1978)	ICD-9 <sup>2</sup> (1979-1998)	ICD-10 <sup>3</sup> (1999-Current)
Heart Disease	390-398, 402, 404, 410-429	390-398, 402, 404, 410-429	I00-I09, I11, I13, I20-I51
Stroke	430-438	430-438	I60-I69
COPD	490-493, 519.3	490-496	J40-J47
Pneumonia/Influenza	470-474, 480-486	480-487	J10-J18
Diabetes	250	250	E10-E14
Infectious/Parasitic	001-009, 020-037, 039-043, 045-065, 067-076, 078-089, 098-130.1, 130.3-136	001-009, 020-037, 039-041, 045-088, 098-139	A00-A09, A20-A33, A35-A39, A42-A49, A54-B19, B25-B99
Chronic Liver Disease and Cirrhosis	571	571	K70, K73-K74
Diseases of Arteries, Arterioles, and Capillaries	442-448	442-448	I72-I78
Nephritis, Nephrotic Syndrome and Nephrosis	580-584, 593.0-593.3, 593.5	580-589	N00-N07, N17-N19, N25-N27
Congenital Anomalies	740-759	740-759	Q00-Q99
Certain Conditions Originating in Perinatal Period	760-779	760-779	P00-P96

<sup>2</sup>International Statistical Classification of Diseases and Related Health Problems, Ninth Revision

<sup>3</sup>International Statistical Classification of Diseases and Related Health Problems, Tenth Revision

<sup>4</sup>International Statistical Classification of Diseases and Related Health Problems, Eighth Revision

\*Source: [http://www.seer.cancer.gov/csr/1975\\_2008/browse\\_csr.php?section=37&page=sect\\_a\\_table.08.html](http://www.seer.cancer.gov/csr/1975_2008/browse_csr.php?section=37&page=sect_a_table.08.html)

## **Appendix IV: Iowa Health Data Information Resources**

## Iowa Health Data Information Resources

ADULT BLOOD LEAD EPIDEMIOLOGY AND SURVEILLANCE: LEAD POISONING PREVENTION PROGRAM: Rita Gergely, Division of Environmental Health, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: (515) 242-6340. Fax: (515) 281-4529. E-mail: [rita.gergely@idph.iowa.gov](mailto:rita.gergely@idph.iowa.gov).

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CANCER INFORMATION SERVICE: Contact Joan Felkner, University of Iowa for more details. E-mail: [joan-felkner@uiowa.edu](mailto:joan-felkner@uiowa.edu).

CARDIOVASCULAR SCREENING PROGRAM DATA: Jill Myers-Geddelmann, Chief, Bureau of Chronic Disease Prevention and Management Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: (515) 242-6067. Fax: (515) 242-6384. E-mail: [jill.myers-geddelmann@idph.iowa.gov](mailto:jill.myers-geddelmann@idph.iowa.gov).

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Data Management Center (CDMC): Pete Weyer, Center for Health Effects of Environmental Contamination, The University of Iowa, 100 Oakdale Campus N203 OH, Iowa City, IA 52242. Phone: (319) 335-4550. Fax: (319) 335-4747. E-mail: [cheec@uiowa.edu](mailto:cheec@uiowa.edu).

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GRADE A MILK CERTIFICATION: Iowa Department of Agriculture and Land Stewardship, 502 East 9<sup>th</sup> Street, Des Moines, IA 50319, Dairy Products Control Bureau, David Brown, (515) 242- 5166. Email; [dairyProducts@iowaAgriculture.gov](mailto:dairyProducts@iowaAgriculture.gov).

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HAZARDOUS WASTE SITE HEALTH ASSESSMENT PROGRAM: Stuart Schmitz, Environmental Engineer, Division of Environmental Health, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: (515) 281-8707. Fax: (515) 281-4529. E-mail: [stuart.schmitz@idph.iowa.gov](mailto:stuart.schmitz@idph.iowa.gov).

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MEDICAID POPULATIONS HPSAs (Federally Designated): (See POPULATIONS HPSAs).

MUAs (Federal Medically Underserved Areas, Federally Designated): Bobbie Bentz, Bureau of Rural Health and Primary Care, Iowa Dept. of Public Health, Lucas State Office Building, Des Moines, IA 50319. Phone: (515) 281-7223. Fax: (515) 242-6384. E-mail: [bobbie.bentz@idph.iowa.gov](mailto:bobbie.bentz@idph.iowa.gov).

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